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**INSIDE:**

**Two Special Pull-Out Sections . . .**

**Education's Annual Report**

Review and statistics from the 1986-87 school year.

**Project Excellence: Designing Education for the Next Century**

A progress report to the people of Montana.

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# Montana Schools

OFFICE OF PUBLIC INSTRUCTION
Ed Argenbright, Superintendent

SUMMER 1988

VOLUME 31, NO. 4

# Proposed College Prep Curriculum: Two Views

*We asked Dr Fred Anderson (left), District Superintendent, Miles City Public Schools, and Dr Robert C. Albrecbt (rigbt), Deputy Commissioner of Academic Affairs, Montana University System, to comment on the proposed college preparatory curriculum Dr Albrecbt is a proponent of tbe standards, and Dr Anderson has been an outspoken critic of the proposals. Tbeir responses are included here (See proposed curriculum, box, page 5.)*

The Board of Regents' admission standards were, by their own explanation, developed to address four areas of concern to the Board of Regents and apparentiy to members of the University System. The four areas of concern inciude (1) the need to control postsecondary enrollment, (2) the need for enhancement of quality; (3) the need for reduction of remediation; (4) improvement of retention.

An expression of concern either about the appropriateness of the standards as they are now prescribed or their ability to satisfy the needs of postsecondary education as perceived by the Regents tends to result in being branded an advocate of mediocrity or at ieast one who promotes substandard student performance. My comments are based in a commitment to the quest for schoiastic excellence and from the belief that the primary foundation of a democratic society iies in a broadly educated populace.

Much of the opposition to the Regent's entrance requirements centers around the specific nature of some requirements and the ramifications the requirements hold both for secondary school curricula/staffing and for the quality level of certain specified courses. Few people are opposed to requiring three years of mathematics as an entrance requirement; however, many find it inappropriate that the Regents have specified those courses as Aigebra i, Geometry and Algebra II. The Regents in their recent "March 10, 1988 Admissions Standards Report" defend Algebra II as a required course by stating "Since the units in the system now require of all students a math course beyond high school Aigebra il, that does seem essential." Although I am certain that

*continued next page...*

The Board of Regents took the first step in raising admissions standards in 1984 when it recommended a set of courses for college-bound students. Two years later the Board elected to require the College Preparatory Curriculum for scholarship students in 1988 and for ali first-time students in 1990. The purpose of recommending and finally requiring the curriculum of the college entrant is to raise the quality of education in the Montana University System. While Montana high schools have long provided high quality courses, many students have not selected courses that would assure their success in college. Many students have entered college without the English, math, science and social science skilis that would enable them to stay in college and successfully complete their work. An unusually high number have dropped out of college, albeit for numerous reasons, but many of those are students inadequateiy prepared.

In other states that have adopted a college preparatory curriculum similar to the one proposed in Montana, student scores on the ACT and SAT have increased, college grades have risen, college retention has increased and graduation rates have increased. In other words, students have been academically more successfui. The number of college-bound students has remained stable. in the research done at one of our own coileges the iink between high schooi courses and college success was dramatically shown. As in other states, those students who took the course work now required for 1990 received higher grades and stayed in college longer. We can reasonabiy expect better performance in college from students who have taken more academic work in high school. That will enable the colleges to raise the quality of the work expected from their students.

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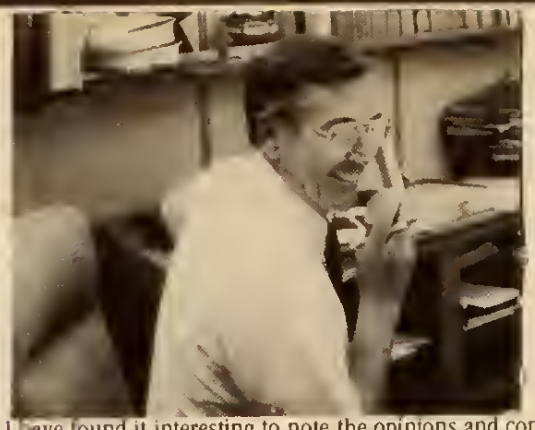
# FROM THE SUPERINTENDENT



I have found it interesting to note the opinions and conclusions from opposite corners addressing the recent Loble decision on school funding. The teachers' union perspective claims that the decision will produce equity and, thus, **more** revenue. The taxpayer organization envisions more equity, more accountability and **less** revenue. I believe that the solution to our problem lies somewhere **between** those two polarized ideas. The solution must address the reality of our problem, our state's economy, and the future of our state.

Local control, an issue that produces much discussion, is a reality of the case. District levies, approximately $120 million, are in the "third tier" of our current funding system and have been determined by the decision as not meeting the constitutional test of equality. Local control and local willingness to fund schools existed in Montana before the foundation program was devised in 1949. The major issue in the appeal is local control.

Those who argue that local control would not be affected to any great degree haven't given enough consideration to what would happen if the third tier, or the local ability to raise additional taxes to provide additional opportunities for local children, were eliminated. Would all schools then be the same? Probably not. Would some schools suffer? Certainly.

The same experts who testified for the plaintiffs in our case recently presented similar testimony in the states of Texas, Wisconsin and New Jersey. They indicated that the local contribution (the voted levy) should be eliminated so that equity could prevail.

The real issue of the Loble decision rests in the solutions.

—I am still, as I was in 1981, a proponent of a cap on school expenditures in order to control costs of education. With more state involvement, we can expect to have more required accountability.

—Let's simplify the school budgeting process by considering one fund instead of many, one budget instead of many. Most people involved in school business find the finance system far too complex.

—Some kind of limit on taxation, specifically property taxation, is a reality. More than 50 percent of the revenue for school funding comes from property tax. We can't tax people who aren't here. We must recognize the state of our own economy and not expect the impossible.

—We can bring about some tax reform which will produce equity. However, I don't believe there is a quick fix. In 1983, we increased the county millage from 40 to 45 mills; let's make another increase with a trade-off from district levies.

—Some solutions may very well require significant changes, such as consideration of a statewide salary schedule for teachers and administrators.

—Some solutions will be difficult to find: Does "equal opportunity" mean absolutely equal opportunities for students in Opheim and Billings? Does it mean exactly the same curricular opportunities? Do students in Dutton have to have exactly the same number of lab courses as the youngsters in Great Falls? If Hamilton can't afford a course, does that mean that Colstrip can't offer it either? Is that equal opportunity? Those kinds of questions will be hard. I'm hoping that some of the solutions will come from emerging technology—using distance learning, for example—as these capabilities begin to unfold.

Very simply stated, the realities are a need for equity, local control, taxation our people can live with, an economy that supports people. The solutions also have to be in the realm of reality. Let's not lose sight of the quality that we currently have in Montana education. Let's not give up local control. Let's find a solution that protects and continues to advance the fine quality of education that we give our children, keeping in mind that education, good education, is good economics for Montana.

*—Ed Argenbright*
*State Superintendent*

## Two Views cont.

*Anderson cont.*

there are programs present on the campus of each university unit that require math skills beyond the level expected of a high school Algebra II student, I douht that they constitute a simple majority. There are many professions that simply do not require math skills beyond the Algebra II level.

A predicted outcome is the erosion of the quality/content level of Algebra II courses statewide. Algebra II will tend to become less of a stringent pre-college course to accommodate the larger distribution of student ability and aptitude levels. The same effect will be felt in some foreign language classes.

A second area of concern with the standards, especially in smaller schools, is the requirement of one year of visual or performing arts, excluding pep bands, etc. Significant curriculum/staff adjustments will be required in many schools to accommodate this standard. A survey of several high schools indicates that, of the top twenty percent of this year's graduating class, almost half have not completed a year of visual or performing arts.

The requirement of two years of one foreign language or two additional years of one of the other prescribed courses is, in itself, interesting. Few can argue with the Regents' contention that the study of foreign language prepares students for cultural interaction, while teaching the skills of concentration and self discipline. Yet if these skills are deemed essential in addressing the four priorities identified by the Regents, it seems somewhat inconsistent that any two of the other specific courses can replace the foreign language requirement. It would seem that the Regents, given the attributes they assign to the study of foreign language, would have afforded it at least the status of visual or performing arts.

The standards tend to block students into an "academic college prep" high school curriculum with little opportunity to pursue electives in other instructional areas. Realistic or not, the vast majority of parents aspire to have their ninth graders ultimately enroll in college; consequently, most students will enroll in the course specified in the Regents' admission standards. The long-term effect will he devastating to the vocational and practical arts electives.

In summary, I feel the Regents will effectively accomplish their first objective: controlling postsecondary enrollment. Few of us in high schools realized that Montana's University System was presently overcrowded! None of the recruiters from the units have mentioned overenrollment as a problem. On the contrary, they repeatedly bemoan the fact that so many students presently choose to attend college out of our state.

The second identified area of priority for the Regents was the need for the enhancement of quality. Few can argue with this motive. Sadly, they only addressed a portion of the problem: incoming students. Certainly, minimum GPAs and test scores will provide a more exclusive student clientele; however, there is little documentation to indicate that the prescribed courses will ensure a "higher quality" student.

The third priority of the Regents is the reduction of remediation of incoming students. Although they have not defined the areas which have historically required the most remediation, inquiry indicates that English skills are most frequently the area of primary deficiency. How will the specified courses in visual or performing arts, world history or foreign language alleviate the problem? Why aren't specific requirements being made in English if this is a major problem? Algebra II should not be required as a solution to mathematics deficiencies. Certainly students who successfully complete Algebra II and geometry should not he in need of remediation in the math area.

The fourth area of priority is retention. There seems to he little research to indicate that implementation of academic admissions standards will significantly improve student retention. Unless I am mistaken, research indicates that one of the most significant reasons for student "drop out" at the postsecondary level is financial rather than scholastic.

Perhaps the Regents' admission standards are more directly focused on setting the stage for anticipated (hoped for) revisions in University System funding than with the four stated reasons.

*Albrecht cont.*

The College Preparatory Curriculum includes courses basic to academic success in college whatever the student's major. For the most part the courses are designed to prepare students for the general education requirements in the units of the Montana University System. For example, all of the colleges and universities have mathematics requirements that build on the Algebra II course in high school. Without that high school course, students must begin with a remedial course in mathematics. The requirement of three math courses before college entrance prepares the student for the math requirement in Montana colleges and for those in many of the other states where our students go. High schools have long provided students with the opportunity to take at least three years of math; in fact, most of them provide at least four years of mathematics. Virtually all Montana high schools offer to the college-bound student a variety of courses that exceeds the college preparatory requirements in every state. A large number of students have, unfortunately, not availed themselves of the opportunities presented and have come to college unprepared for the challenges that high quality higher education presents.

The units of the Montana University System are working to provide high quality education in spite of severe underfunding. The quality of the high school education in the state enables them to admit talented students with excellent potential. The College Preparatory Curriculum requirements ensure that those students are ready for college level work in math, science, English and so forth without spending time catching up on material not taken in high school. It is gratifying for all concerned to he working towards higher quality education for talented students in the state of Montana.

The entrance requirements for individual institutions state the expectations for students who wish to enter directly from high school. They offer a guide and a challenge. Students who wish to go to some out-of-state colleges and universities have heen ahle to make their plans knowing their chances of entrance and success. Those who seek entrance to our state schools deserve the same opportunity. Students who meet the requirements of ACT, grade point average or class rank can confidently expect academic success.

Admissions standards are designed to raise the quality of higher education while helping students know what is expected of them. The opportunities offered in our vocational technical centers, community colleges, colleges and universities provide students at all ability levels and interests a chance for successful postsecondary education for careers, citizenship and lifelong learning. The College Preparatory Curriculum is designed for college-bound students, but its content, which closely resembles that often recommended for all students, will prepare students for a variety of postsecondary education. Continuing changes in careers and technology require a better educated citizenry.


## MONTANA SCHOOLS

*Montana Schools* is published quarterly (September, December, February, May) by the Office of Public Instruction, State Capitol, Helena, MT 59620. It is distributed to public schools and members of boards, associations, organizations and individuals interested in education in Montana.

Deadlines are six weeks before the first day of the publishing month (e.g., six weeks before September 1).

Ed Argenbright
*State Superintendent of Public Instruction*

Mardyn Miller
*Executive Asst. to the Superintendent/Editor*

Gail Hansen
*Layout*

Lori Clark
*Typography*

# Interview With a Montana Century Citizen

*Two years ago we began a search for students who would be willing to interview a Montana century citizen (a Montanan who was born in Montana's statehood year of 1889 or before). This fall we had two students participate: one from Lodge Grass High School, the other from Capital High School in Helena.*

*Larry Brewer, a 17-year-old sophomore from Capital High School, met Mae Wiley Walters, a 102-year-old wonder woman from Helena, in the lounge at her senior citizens' residence. Both were made even more nervous by the presence of TV cameras and newspaper reporters, because this interview had been selected to be taped for submission to NBC's Today Show. On the tape Mae, Larry and Centennial Director Tom Daubert presented centennial deeds to Today Show members Jane Pauley, Bryant Gumbel and Willard Scott, and Mae invited the NBC celebrities to Montana for the centennial celebration.*

*After the taping Larry interviewed Mae and visited her in her room to view her arts and crafts projects. His story is presented here.*

*It's very likely that we have one of these wonderfully interesting people in your area. If you have a student who would like to interview a century citizen, we will locate the person and help you set up an interview. To participate in the project, which will culminate in a published book of student essays, contact Marilyn Miller, Executive Assistant, OPI, 444-3656.*

*Larry Brewer, Helena Capital High School student, interviews 102-year-old Montana Century Citizen Mae Wiley Walters.*

**Mae Wiley Walters**

Mae Wiley Walters was born in Washington, DC on November 19, 1885. That makes her 102 years old and older than the State of Montana! (Montana did not become a state until 1889.)

Mae's mother wanted to leave Washington, DC, so she marched into the train station with just some money, a few clothes and little Mae. She plopped her money on the counter and asked the ticket agent to give her a ticket to wherever that much money would take her; that place turned out to be Salt Lake City. Soon after arriving in Salt Lake City, Mae's mother heard about and took a job in Havre. Her mother wanted Mae to get a good education and sent her to St. Vincent's Academy in Helena.

Mae was still very young then (remember, this was still the 1890s!), and she doesn't remember too much about that period. She does remember the boarding houses her stepfather ran in Belmont and Elkhorn (now ghost towns). She also remembers when Charlie Russell would come to the boarding house. He often drew funny little pictures for her on tops of cigar boxes. Mae says now that she didn't think about saving them but wishes that she hadn't thrown them away!

After leaving St. Vincent's Academy, Mae met and married a handsome young pharmacist by the name of Nelson P. Walters. After their marriage Mae and Nelson moved to Wolf Point where they opened a pharmacy. While they were there Mae made many friends among the Indians of the area. One that she remembers well was Dolly Acres; Dolly had an opportunity to be one of the first Indians to speak in front of Congress, but she didn't go through with it.

In the past years Mae has tried to keep her hands flexible by doing artwork. She has done many beautiful wood carvings, among them a coffee table. She paints pictures and has done magnificent paintings on china.

It was thrilling to meet a person like Mae Wiley Walters. She is still interested in everything around her and had many stories to tell. I wish this little lady could live forever!

## NATIONAL TEACHER EXAMINATION CORE BATTERY

*Test Date*

**Who Should Take the Test?**

The National Teacher Examination Core Battery is required for teacher certification in Montana. Applicants for initial certification, individuals reinstating lapsed certificates, and individuals changing to certain classes of certification should take the test.

**When?**

June 25, 1988

**Where?**

College of Great Falls, Great Falls—Rev. Jim Sikora (761-8210)

University of Montana, Missoula—Berta Plane (243-4711)

Western Montana College, Dillon—Kathy Mehring (683-7325)

Eastern Montana College, Billings—Russell Forman (657-2283)

Montana State University, Bozeman—Daniel Chandler (994-4311)

Carroll College, Helena—Rev. Daniel Shea (442-3450)

Dawson Community College, Glendive—Paul Fasting (365-3396)

Northern Montana College, Havre—Gerald Bekker (265-3700)

**How?**

Examinees should contact the supervisor at the test center as soon as possible if they plan to take the test. They should state the name of each test (Communication Skills, General Knowledge, Professional Knowledge) they plan to take. **The deadline for registration is May 23, 1988.**

**Cost?**

One Core Battery Test—$35.00
Two Core Battery Tests—$45.00
Three Core Battery Tests—$50.00

# NEWS BRIEFS

## "Respect for the Law" Theme of 1988 Law-Related Education Program

The Seventh Annual Montana Law-Related Education program will be held from July 18 through July 21 in Helena, according to Rick Bartos, course instructor. The course will be held in the Montana Supreme Court Chambers with the theme "Respect for the Law; Respect for the Judiciary." Two graduate/recertification credits will he available from the University of Montana, Montana State University and the Office of Public Instruction. The only cost would be for university credit. Teachers selected to attend the program will be awarded a $100 stipend to defray attendance costs.

Speakers for this year's program will include Chief Justice Jean Turnage, Justice Fred Weher, Justice William Hunt, and Justice John C. Harrison. The program will include a presentation by officials from the Montana Drug Enforcement Agency and by Dr. Hal Stearns and former Missoula Police Chief Doug Chase on classroom methodology in incorporating law-related education into the high school curriculum.

Various areas of law-related education will be covered, including constitutional law, criminal law and contemporary legal issues. Contemporary law related education materials will be available and distributed free of charge to participating teachers.

The Montana Office of Public Instruction, the State Bar of Montana and the Montana Supreme Court cosponsor the program. If you are interested in participating in this seminar, write or call Linda Brandon, Legal Services Division, Office of Puhlic Instruction, Room 106, Capitol Station, Helena MT 59620, 444-4402.

## Regional Reading Conference Set

The 16th Plains Regional Reading Conference will he held in Fargo, North Dakota on September 29, 30 and Octoher 1, 1988 and will feature a "Harvestful of Fine Speakers."

The theme of the conference is "Reading is the Bounty of Life," and speakers will include nationally known educators and authors.

Registration materials are available from Ellen Maasel, 16th Plains Regional Conference, Box 736, West Fargo, ND 5807'8.

## Original Teacher Corps Members Sought

Former members of the Teacher Corps, a federal program of the 70's and early 80's, are organizing themselves as a network to assist in the recruitment of men and women from minority groups into universities and then into teaching.

The original Teacher Corps program reflected a national concern about improving learning opportunities in schools serving children of parents living in low income areas. Universities preparing teachers worked with local school districts, schools and the communities in which those schools were located to improve schooling for "at risk" students. During its 15 years of existence some 240 universities, nearly 500 school districts and 10,000 teacher interns participated in the program.

Recognition of the impending seriousness of the problem and the unique contrihution the expertise of Teacher Corps alumni could make to its contrihution caught the attention of the E. W. Hazen Foundation. It provided a grant of $30,000 to the Institute of Educational Leadership in Washington to set up the network and initiate recruitment activities. Jim Steffensen, former Deputy Director of Teacher Corps, is serving as the volunteer head of the network project.

The network is seeking to contact as many participants in the federal program as possible. If you are a former teacher, intern, director, principal, dean, etc. who was engaged in a project, please send your name, address and current affiliation to Dr. James P. Steffensen, Teacher Corps Alumni Network, The Institute for Educational Leadership, 1001 Connecticut Avenue, NW, Suite 310, Washington, DC 20036.

## Two Montana Students Win Young Writer's Awards

Two Montana elementary students have heen selected as winners in the 1987-88 Young Writer's Contest. The entries of Mischa Jakupcak of Stevensville Elementary School and Kristie Chupp of Yaak Elementary School will be included in the fourth edition of "Rainbow Connection: Stories and Poetry hy Young People."

## Teacher of the Year Selection Process Begins

Each year the Office of Public Instruction coordinates the Montana Teacher of the Year program, recognizing the valuable contributions of one of the state's outstanding classroom teachers. The deadline for this year's program is **September 30, 1988.**

All candidates for the 1989 Montana Teacher of the Year must use the official portfolio application issued hy the Office of Public Instruction. The portfolio contains the following components.

1. Identification page for the candidate's name, school, black and white photograph

2. Basic data sheet

3. Section for an official letter of nomination from the candidate's school district official.

4. Questionnaire to he completed hy the candidate in the format and length requested

5. Section for letters of recommendation.

The questionnaire consists of essay questions covering the candidate's education contribution/accomplishments, professional development, community involvement, ideas on educational issues and trends, interaction with students, advocacy of the teaching profession, interaction with other teachers, accountability for student outcomes, and communication skills.

Schools, groups or individuals may nominate a Teacher of the Year. From this "Honor Roll of Montana Teachers," a state winner and two finalists will be selected.

Candidates should he exceptionally skilled and dedicated teachers who plan to continue in an active teaching status. Certified teachers K-12 in any state-accredited Montana school are eligihle. Nominations should he made without discrimination on the basis of race, sex, religion, national origin or handicap.

## Historic School Buildings To Be Showcased

Beckley-Cardy, a national school supply distribution company in Duluth, Minnesota, is showcasing historical school buildings in a program called "America's Educational Treasures." The company is seeking out schools in America that make an historic architectural statement to use on covers of future catalogs and supplements.

Any school representative is invited to suhmit a school for consideration. To do so, send background about the building, and, if possible, a snapshot. A contact person should be listed. Entries should be sent to Dave Krikorian, Beckley-Cardy, One East First Street, Duluth, MN 55802.

Beckley-Cardy will arrange for professional photography of selected schools.

## A Missing Child Found in Montana

The Department of Justice has announced that a missing child was discovered recently at Emma Dickinson School in Missoula.

The student's teacher became suspicious hecause the child was larger and more educationally advanced than average kindergartners and because his black hair was growing out blond. An examination of the birth certificate used for identification proved that the certificate had heen altered. The father was arrested for tampering with puhlic records; the FBI was alerted and identified the father through fingerprints. The child was listed on the National Crime Information Center as a missing child from Florida and was placed temporarily in the custody of the Department of Family Services.

The Missoula County sheriff's office praised the teacher, Gail Weber, and Emma Dickinson School principal Jim Denny for their role in the case.

## Electronic Bulletin Board Available

Montaua City School is offering educators and students a local connection to the FrEd Mail Network. FrEd Mail is an electronic bulletin board system that provides an opportunity to communicate with public and private elementary, middle and high schools, universities, and offices of puhlic instruction all across the nation.

Features of the system include KIDWIRE, a student newswire service; IDEAS, a sharing forum for teachers; and special interest conferences such as SCIENCE and MATHEMATICS. Schools, classes, or individual students can hecome involved in activities with other schools, classes, or individuals at 75 other sites across the United States and into Argentina and Puerto Rico.

The Montana City system operates from 5:00 p.m.-8:00 a.m. Monday-Thursday, and from 4:00 p.m.-8:00 a.m. Friday to Monday.

The system can handle 300 or 1200 baud and the phone numher is 442-6737. Several HELP sections are available online, so users of all levels are welcome. The system operator (SYSOP) is Christopher Martin.

## Smoke Free Class of 2000

Montana's Smoke Free Coalition is gearing up for a 12-year project aimed at making the first graders of 1988 the Smoke Free High School Class of 2000.

Smoke Free Class of 2000 is a nationwide joint effort of the American Heart Association, American Cancer Society and the American Lung Association. The Montana affiliates currently are making plans to provide this opportunity to Montana's first grade students. Major activities planned for 1988-89 are to provide kits to all first grade classes during the fall of 1988 and to celehrate graduation for all first graders in the spring of 1989.

For more information on the project write to Tobacco Free Schools, 825 Helena Avenue, Helena MT 59601.

## Elementary Physical Education Teacher of the Year Named

Roger DiBrito, elementary physical education teacher in Missoula School District No. 1, has heen named the *Elementary Physical Education Teacher of the Year* for the Northwest District of the American Alliance for Health, Physical Education, Recreation and Dance. As recipient of the Montana award, DiBrito's nomination was placed in competition with state winners from Washington, Oregon, Idaho and Alaska.

Cited as "an excellent teacher who exemplifies the qualities desired in elementary physical education," DiBrito has heen involved in the "Montana Bicyclist Training Program." His work is internationally recognized through presentations and workshops.

Roger sums up his thoughts about education this way: "What we teach is important. How we teach is important. The way we live is most important. Teaching Physical Education is much more than a profession. It is a way of life."

# BRIGHT IDEAS

## *Great Falls School District #1: Challenging Our Second Century*

Great Falls School District #1 celebrated its 100th Anniversary during the month of March. (Although the school district was in existence in 1885, it was part of Chouteau County. In the fall of 1887, Cascade County was separated from Chouteau County, and School District #1 was organized on March 9, 1888.

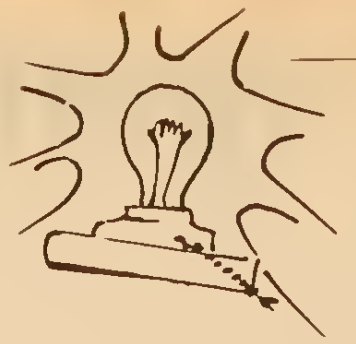
Some of the district's celebration events were shared by Audrey Olson, Information Consultant for the Great Falls school district.

- With a futuristic theme, "Challenging Our Second Century," a display at the Administration Building featured junior and senior high computer-generated work in English, art, drafting, math, journalism and office education. A second display showcased thirty state and national program awards garnered by the district in the past four years.
- Elementary schools, in conjunction with their PTA's, hosted special events incorporating historical themes.
- A month-long public exhibit of mementos from the early days of School District #1 was displayed at the Cascade County Historical Society at Paris Gibson Square. Tours and videotaping of the display have been arranged so the tapes may be used as a learning tool.
- One hundred fifty senior citizens were guests of the district for a birthday lunch at North Junior High School in appreciation of their many years of support. An anniversary slide show of past and present district activities, produced by Bill Larson, Music Supervisor, was shown, and the North Junior High School band, choir, and drama department performed.
- A videotape giving an overview of the district was written and narrated by Audrey Olson and produced by Tony Armbrust, Producer/Editor for KFBB-TV. The tape will run at the Great Falls airport on a continuous loop video that tells travelers what makes Great Falls great. Employees can utilize the tape for presentations to outside groups.
- "History Highlights of School District #1" was co-authored by administrative secretaries Regina Larson and Vi Stahlecker. They researched and compiled interesting and amusing facts and anecdotes from school board minutes of the past 100 years. Copies of the book will be placed at each school library, the Cascade County Historical Society, the Great Falls Public Library, and the Montana Historical Society.
- As a lasting tribute to the 100th anniversary, ten $600 Anniversary Scholarships were presented to five seniors from Great Falls High School and five from C.M. Russell High School. Great Falls public school employees, other individuals, businesses, and organizations donated $6,000 to make these "one time only" scholarships a reality.

The Anniversary Committee consisted of long-time employees of the district, Audrey Olson, Information Consultant, Chairman; Vi Stahlecker, Administrative Secretary to the Superintendent; Regina Larson, Supervisor of Stenographic Services and Print Center; Bill Larson, Supervisor of Music; Jim Poor, Supervisor of Art; and Judy Ericksen, community volunteer.

## *Bright idea no. 2*

## *Integrating Laser Disc Technology into the Curriculum*



*by Dr. Terri Pavlonnis*
*Secondary Curriculum Coordinator*
*Great Falls Public Schools*

In the challenge for educators to face the demands of the 21st century, one of the most exciting innovations is laser disc technology. Since September 1986 the Great Falls Public Schools have expanded from 2 laser disc players and 1 courseware package to 36 laser disc systems and the integration of interactive video into the areas of math, social studies, life science, physical science, and art in the secondary schools, grades 7-12. A district-wide technology goal supported and adopted by the school board is absolutely critical to the inception of this innovation into a school district.

**Planning**—An optimal way to ensure the use of any one innovation in a school district is to make it part of the standard curriculum process generated by teachers of that subject area. Since our Board of Trustees had adopted a goal for the integration of technology into the curriculum, it was only natural to build that component into each subject area under review. In 1985-86, earth science teachers were charged with generating a curriculum to teach earth science in the 9th grade after years of offering the course to junior high students only. A technology component was built into the curriculum which incorporated the use of computers and laser discs. The money was appropriated as part of the curriculum adoption along with textbooks and lab supplies. (There is a line item in our budget available each year for curriculum review/adoption.)

**Coordinating**—The secondary curriculum coordinator was responsible for coordinating this new technology into the earth science curriculum. It quickly became apparent that a crash course in interactive video was needed. Part of this re-education meant talking with company representatives on toll free lines about how to set up equipment, operate the program and begin teacher utilization. The importance of having one person denoted the "laser disc expert" to keep the positive momentum of the innovation flowing cannot be stressed enough. This person not only provides the momentum but also is responsible for keeping abreast of the latest developments and research in the field.

**Training**—With two systems in place and six teachers involved, hands-on training was the next step. A conscious decision was made to allow teachers to "play" with the system at a Level I mode for the first semester. In January, specific hands-on training at Level III was provided to earth science teachers by the courseware company. Additionally, an awareness session by this company was presented to physical and life science teachers to heighten their awareness of the innovation.

**Evaluation**—At the end of the first year, an evaluation of the entire earth science curriculum was conducted. Revisions were made in learner outcomes, labs and the technology component. It was at this time that teachers requested additional hardware and staff development to increase the use of interactive technology. A second system was ordered for each high school raising the ratio of 4 laser disc systems to 6 teachers.

We have learned some valuable lessons from our initial efforts. There are companies willing to work with educators to provide relevant courseware that fits curriculum. We have received inservice training free of charge by companies willing to work with teachers in hands-on training as well as awareness. We have found peer teaching going on in buildings and a renewed enthusiasm for subject matter by instructors and students. Our instructors are excited by the possibilities available to them to reach the "visual learners" of this decade. The results have been well worth the effort, time and money committed by this district.

Now in our second year of laser disc technology, it is possible to outline our process of integration in hopes of assisting other organizations struggling with where, how, and when to begin to utilize this exciting new innovation.

For further information, contact Dr. Terri Pavlonnis, Great Falls Public Schools, P.O. Box 2428, Great Falls, MT 59403, 791-2378.

## *Board of Regents College Preparatory Program*

### *Required of Scholarship Students in 1988 and All First-Time Students in 1990*

1. Three years of mathematics which shall include Algebra I, Geometry and Algebra II. Students are encouraged to take a math course in their senior year.
2. Four years of English—in each year the content of the courses should have an emphasis upon development of written and oral communication skills and literature.
3. Three years of social studies:
   a. World History
   b. American History
   c. Government, Economics or other third-year course
4. Two years of laboratory science selected from Earth Science, Biology, Chemistry or Physics.
5. One year in the visual or performing arts.
6. Two years of one foreign language when it is available in the school curriculum or two additional years of courses selected from (1) through (5) above.

# Spotlight On

# The Hidden Asset of Publi

Tucked away in a corner of Bozeman's Willson School is an office nearly taken over by green plants. In the leftover space Joy Kreikemeier, volunteer coordinator for the Bozeman district, enthusiastically does her joh—recruiting and matching volunteers to teachers and programs that need help.

Joy shared her thoughts about the program and pictures of some of her crew members at "work."

*by Joy Kreikemeier*
*Volunteer Coordinator*
*Bozeman Public Schools*

Volunteers are changing the face of public education. People with backgrounds as diverse as college students, homemakers, parents of school children, businessmen and women, and the elderly are impacting our schools in a most positive way. In Bozeman local residents hear about the volunteer program through public service announcements on radio or TV and by word of mouth.

One of our most popular programs is the Listening Program, which gives elementary students an opportunity to read individually to a volunteer from one to two hours a week. Volunteers are trained for their positions through a seminar given by the district hearing specialist. Designed and begun eight years ago for the Bozeman school district as a means of improving literacy skills among students, the program is a delight to volunteers as well as those easily excited first-through-fourth graders. Teachers are especially pleased with this program and the individual attention it provides to students.

Another valuable service provided to Bozeman public schools by volunteers is the Special Needs Program. Individuals experienced with, or enrolled in an academic program requiring field work with, special needs children are 'hired' by teachers needing assistance with their special students. The program is popular with university students, although others—usually retired teachers—may also get involved.

**Joy Kreikemeier, Volunteer Coordinator, Bozeman School District.**

**Eisie Townsend, retired university professor, giving pointers to 5th grade Creative Writing Scholars.**

For more information on the Bozeman volu
Joy Kreikemeier, Volunteer Program Coordinat
P.O. Box 520, Bozeman, MT 59715 or phone

# Public Schools: Volunteers

**Nancy Lapeyre, filing paperbacks.**

**Kay Campeau, Bozeman High School librarian, says "I don't know where we'd be without our volunteers. They have completely updated our newspaper holdings and revamped needed areas. One volunteer, formerly a professional librarian at the university, has cataloged and renamed the entire file of art prints and has given invaluable, friendly technical advice."**

One of the most unrecognized groups of volunteers in the schools is parents. In Bozeman, there are Parent Advisory Councils for every school. At the elementary school level these councils are very active in fund raising, room monitoring, annual carnivals and book fairs, and teacher assistance. At the higher grade levels the councils primarily act as a forum for discussing issues critical to their adolescents and teens. Parents have provided schools with playground and computer equipment, purchased athletic uniforms, and sponsored special events

Many volunteers come from RSVP, Retired Senior Volunteer Program, an organization created to provide retired Bozemanites with "work." These individuals volunteer to do a myriad of tasks for teachers and administrators in the district. Mostly, they work on special projects, such as cutting out and laminating items for teachers, sorting and filing, mass mailings, and judging school contests. Other volunteers are members of the community who simply wish to donate their time and talent to the schools. Rare are the times when our office receives such an offer and cannot find the volunteer "something to do."

It has been estimated that non-parent volunteer hours donated to the school system are worth approximately $3,000 each year. Simply put, volunteers gladly do what teachers sometimes can't: They give students "special" attention!

**Listener Trudy Burke assisting 2 second graders.**

**Second grade teacher at Irving Elementary, Joanne Soares, is delighted with her volunteer. "Trudy Burke is just wonderful to work with! I was really excited after she left on that first day...I was floating on a cloud. She's a former teacher and, gosh, I think she's going to teach my class and me so much! She has a lot of great ideas already."**

he Bozeman volunteer program, call or write
ogram Coordinator, Bozeman Public Schools,
59715 or phone 585-1500 ext. 220.

# RESOURCE NOTES

## TRAFFIC EDUCATION

### Advanced Driver Education Workshops '88

Twenty four one-day Advanced Driver Education Workshops will he held in Lewistown for persons wishing to learn crash avoidance techniques Dates are June 6, 13, 17 and 27; July 1, 15, 18, 22, 25 and 29; August 1, 5, 15, 19, 22, 23, 24, 25, 26, 29, 30 and 31; September 1 and 2 Participants will have an opportunity to learn and practice such things as evasive maneuvers, controlled braking, skid control, off road edge recovery, severe cornering and serpentining This program is designed to reduce a driver s risk of an accident by developing and perfecting special driving skills and techniques in an adverse, hut controlled, environment. The registration fee is $100 Further information and applications may be obtained by writing me or calling 444 4432

### Operation Driver Excellence

The 1988 Operation Driver Excellence National Finals, a teenage safe driving program, will be held in Indianapolis, Indiana, on July 9, 10 and 11 For an entry torm or information about how to enter, write or call AMVETS National Headquarters or contact your local AMVETS representative Call or write today! Operation Driver Excellence, AMVETS National Headquarters, 4647 Forbes Boulevard, Lanham, Maryland 20706 9961. (301) 459-9600 Awards include over $25,000 in prizes and scholarships, a new Dodge car for use of the national winner for one year, the opportunity to learn the latest in driving techniques, to meet teenagers from across America, travel plus much more This program is endorsed by the National Association of Secondary School Principals.

### Why Wear a Motorcycle Helmet?

If you ride a motorcycle, a helmet can be the most important piece of equipment you own, not only protecting your head from injury hut also helping to make you more visible on the highway. Statistics show that the head is the most vulnerable part of the body in accidents. For the greatest comfort and protection, a helmet should fit snugly but not tightly. Avoid one that's loose and remember to fasten the chin strap securely. Have fun and be safe hy using proper protective equipment

### ADTSEA National Conference

On August 14-18, 1988, in Boston, Massachusetts, the New England Traffic Safety Education Association will host the National Conference of the American Driver and Traffic Safety Education Association. Mayhe you could plan your annual vacation around these dates and visit the historic sites of the early Colonial and Revolutionary era while participating in this most important conference For more information contact me

*I wish you all a productive and relaxing summer and hope to see you at one of our summer workshops or in Boston at the national conference Best Wishes! If I can be of help, please contact me*

*Curt Hahn*
*Driver Education Specialist*

## SCHOOL FOODS

### School Food Service Training Conference

Administrators and Food Service personnel should be finalizing plans to attend the 12th annual School Food Service Training Conference on August 9, 10, and 11 at Fergus High School in Lewistown Room reservations and preliminary registrations should he made now

This year s conference, sponsored by the Office of Public Instruction, Division of School Food Services, in conjunction with the Montana School Food Service Association, will provide sessions of importance and interest to everyone involved with school food services.

Principal topics will include various levels of management and supervisory training in computer usage, personnel management, program administration, financial management, nutrition, equipment operation, baking, food preparation, transporting and service A class on self improvement also will he offered For further information contact B. Brishin Skiles, Director, Division of School Food Services, Office of Public Instruction, Room 106, Capitol Building, Helena, MT 59620, 444 2501

How to turn fig nuggets into strawberry nuggets: Shirley Nelson of Columbia Falls has been mixing one half gallon DRY strawberry jello with a 25-pound box of fig nuggets and allowing the mixture to stand for three days. She occasionally fluffs the mixture to ensure that each nugget CONTACTS the jello. Add raisins if you like and serve. The little children really love them.

### Summer Food Service Program

The Office of Public Instruction again is sponsoring the Summer Food Service Program in areas in which fifty (50) percent or more of the students qualify for free or reduced price meals Once an area reaches the fifty (50) percent needy level, all students residing in the area are eligible for free meals

In addition to the reimbursement sponsors also are eligible for administrative funds and donated foods

Sponsors are restricted to public or private schools, local, county or state government agencies.

If you are interested in a program or wish additional information, call or write Office of Public Instruction, Division of School Food Services, Room 106, State Capitol, Helena, MT 59620, 444-2501.

## MATHEMATICS

### Standards for Elementary Math Curriculum

The elementary mathematics curriculum found in schools throughout the nation today is largely based in computation with whole numbers, fractions and decimals Most student learning is in a rote fashion, and most lessons focus on drill and memorization of algorithms for basic skills in addition, subtraction, multiplication and division. The majority of research today indicates that this method of teaching and learning mathematics yields very poor results in terms of retention by students or later application to other areas in the mathematics curriculum. Little attention is given today to concept development. While students can memorize tables or parrot back short answers to low level questions, there is little carryover in the area of application of these skills or understanding their uses in problem solving.

At the middle school level, recent analysis of the present day curriculum by Flanders at the University of Chicago showed that less than 30 percent of the materials presented in 6th through 8th grade mathematics textbooks is new. This study clearly indicates that the last three years of elementary mathematics for the majority of students in the United States is a repetition of the first five years. The 30 percent that is new can usually he found in the last quarter of the textbook which is most often skipped or not addressed at all. Yet, these same students, when faced with courses in algebra at the 9th grade level, find that 90 percent of the material in the textbook is entirely new.

While the standards developed by the Commission on Standards for School Mathematics hy the National Council of Teachers of Mathematics (NCTM) for K-8 are divided into the K-4 and 5-8 levels, there is much commonality between the two groupings with standards in each section of 1) problem solving, 2) communication, 3) reasoning, 4) numeration and number systems, 5) computation and estimation, 6) measurement, 7) geometry, 8) probability, and 9) statistics

Standards at the K-4 level were developed on the assumptions that the curriculum should (1) be conceptually oriented and developmentally appropriate to students at this age level, 2) emphasize the development of children s mathematical thinking and reasoning ability, 3) actively involve students in doing mathematics, 4) include a broad range of content and emphasize applying mathematics, 5) emphasize the interrelationship of mathematical knowledge, and 6) make full use of calculators when appropriate

These assumptions speak to students at these levels involved in exploring, validating representing, solving, constructing, discussing, investigating, using, describing, developing, and predicting in the process of learning mathematics As a result, children will develop a strong conceptual framework necessary before beginning skill development

The curriculum as described by these standards is not based on the development of algorithms for the operations with whole numbers only Measurement, geometry, statistics, probability and algebra are most important areas of mathematics which students at these levels can and should study Mathematics ideas should develop from everyday life and then be applied to the real world.

At the 5-8 level, the importance of students being involved in mathematics, problem solving and the application of mathematics to the real world continues as the basis for the development of standards. Important assumptions upon which the standards of the 5-8 level were developed are that 1) all students should experience the full range of topics addressed in the standards, that the topics in the individual standards should be integrated through a selection of rich activities and the relevant situations should motivate instruction, 2) students should experience ideas in real world applications; 3) students should he actively involved in the learning process, investigating, exploring, individually and often working in small groups, 4) instructional activities should take place inside and outside the classroom and these activities should relate mathematics to other school subjects, such as science and art

In grades 5 and 6, all students should have access to a four-function calculator; in grades 7 and 8, scientific calculators should he available at all times for students. Each classroom should he equipped with ample manipulative materials and resource materials to provide laboratory type learning activities and explorations for teachers and students Each classroom should have a computer available for teacher demonstration, and additional computers should be available for small group or individual student use.

# RESOURCE NOTES

These standards will be the driving force behind changes in the mathematics curriculum through the beginning of the next century. New texts, new methodologies, new topics in the curriculum all will come about as a result of the standards developed by the commission.

Every district in Montana with a mathematics curriculum committee should have a copy of the standards, and they should be the focus for discussion by such groups. Districts proposing changes in their mathematics curriculum or developing curriculums for the future should carefully study the standards as they engage in this curriculum development process.

For copies of the standards or additional information regarding them, contact Dan Dolan, 444-4436.

### How Much Is Enough?

A great deal of discussion and controversy has gone on throughout the state regarding the need for three years of mathematics (to include Algebra I and II and geometry) in the Montana Board of Regents' recommended college preparatory program. Critics say that many students do not need to understand Algebra II in order to be successful in college; they believe that this requirement is okay for those studying mathematics, science or engineering but not for those who are considering English, art, music or the humanities. This reflects a great lack of understanding of the need for students to study mathematics at the secondary level not only for college entrance requirements but for many fields in the vocational-technical area as well.

At the present time, every student in every unit of the Montana University System must study a core curriculum in order to obtain a degree. That core includes a mathematics requirement of at least one college level mathematics course, and the **entry level prerequisite** is an understanding of the material contained in a high school **Algebra II** course. In addition, many majors have math requirements that include courses above this lowest level college mathematics course. Business, psychology, agriculture, nursing, education, economics—as well as mathematics, science, engineering and computer science—have additional mathematics requirements. The additional financial cost to parents and students can be considerable if several remedial courses, which carry no college credit, are required before a student can enter the first college level course. Add to this the time delay in being able to enter this class as well as others for which the first mathematics class may be a prerequisite, and the costs continue to rise.

For the past three years, each unit of the Montana University System and Carroll College have required a mathematics placement test for all first-time students. The results are very clear: Students who have failed to take at least three years of college preparatory mathematics in high school have a less than one in eight chance of receiving the necessary score to allow placement in the first-year college mathematics class. If the student has not taken a math class during the senior year, the chances are less than one in ten. Each high school receives a profile of all students from that school who have taken this placement test. Math teachers and counselors should review the profile each year and use it to evaluate the strengths and weaknesses of the mathematics curriculum. They also should counsel freshman and sophomore students concerning the need for additional study in mathematics. Each school also receives a copy of this test which can be given to junior students in the spring. By doing so, students can analyze their own mathematics strengths or weaknesses and make a decision whether or not to take a mathematics class during their senior year.

While these requirements are directed at college preparatory programs, students entering the vocational-technical areas will find similar requirements. Almost any technical related field—electronics, surveying, nursing, medical technology, accounting, industrial technology, etc.—will include a mathematics requirement. Many require the material of a high school Algebra II course.

As mathematics educators interested in the future of our students, we must get this message across to students, parents and counselors who work with students. High school students and counselors need to understand these requirements. Parents need to understand the costs involved in remedial courses taken at the college level. Students can take mathematics classes through Algebra II in high school for free. Students should understand that a full year of instruction at the high school level will make understanding and passing such a class much easier than a one quarter or semester class in college that may be taught in a self-directed manner without a teacher or taught two or three times a week for one hour. The time to study and understand as well as the quality of instruction will be much better in high school than in college.

For additional information on this topic, contact any unit of the Montana University System and request a copy of the math requirements for the core curriculum or numerous other majors. Ken Tiahrt, Chairman of the Mathematics Department of Montana State University, 994-3601 can be contacted for additional copies of the Mathematics Placement Test if needed.

*—Dan Dolan*
*Mathematics/Technology Specialist*

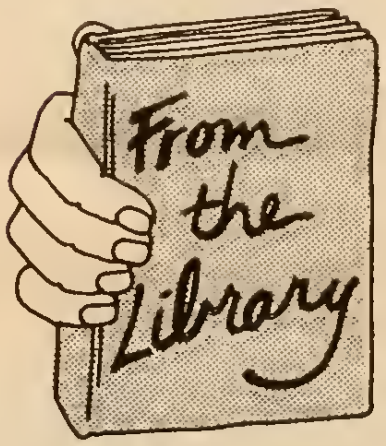
## GUIDANCE/COUNSELING

### Guidance Workshops

"Counseling, Students' Needs, and the Technological Society: High Touch in a High Tech Age," a conference concerning the math and science needs of students for their future education and careers, was attended by many counselors, administrators and math and science teachers. Speakers included a business representative, a high school counselor, a college advisor, a vo-tech advisor, and individuals representing the fields of math and science.

Planning will begin this summer to conduct more of these workshops for Bozeman, Billings and Havre. Those who wish to attend the conference at one of these sites or who have suggestions on speakers or topics should contact Judy Birch, Guidance Specialist, at the Office of Public Instruction, State Capitol, Room 106, Helena, Montana 59620, 444-5663.

*—Judy Birch*
*Guidance Specialist*




## LIBRARY MEDIA

### Summer Highlights

Summer's coming, and with it, a little catch-up time to do some reading. If you are looking for new books to read, review and keep for your library, stop by my office to browse and pick out some books to review.

Don't forget to attend the public hearings on Project Excellence scheduled for your area: Kalispell, May 16; Missoula, May 17; Butte, May 18; Billings, May 19; Miles City, May 20; Great Falls, May 24; Wolf Point, May 25. This is your opportunity to express your concerns regarding accreditation standards to the Board of Public Education.

Check your local PBS station for listings for the "Reading Rainbows" programs. They were available last summer for tape and three-year retention rights.

Have a great summer vacation!

*—Margy Rolando*
*Library Media Specialist*

## ARTS IN EDUCATION

*Music in Our Schools* and *Youth Art Month* were celebrated in the Capitol Rotunda on March 17, 1988 with delightful performances by the Helena Middle School Orchestra directed by Beth Mazanek and the Smith School Choir directed by Barbara Berg. A two week exhibition (March 14-24) sponsored by MAEA included art work from students around the state.

The 1988 Montana Art Interscholastics (MAI) was held at Helena High School March 17-19 with 270 students attending from across Montana. Artists and professionals gave workshops on different media, students exhibited their own work for critiques and took advantage of museums, galleries and events in the community, such as the world famous Archie Bray Foundation, the new Holter Museum and the addition to the Historical Society for the Charlie Russell Gallery.

The Arts in Education Program at the Office of Public Instruction continues its dialogue with the Getty Center for Education in the Arts. State art supervisors from all 50 states were invited to a two-day "Mini Getty Institute" prior to the National Art Education Association Conference in Los Angeles, April 7-12.

The Music Educators National Conference was held in Indianapolis, Indiana, April 10-23.

Available from The American Alliance for Theatre and Education, Theatre Arts Department, Virginia Tech, Blacksburg, Virginia 24061-0111 is a K-12 Model Drama/Theatre Curriculum with philosophy, goals and objectives.

The Montana Visual Art Curriculum Guide is still not printed but will be sent to you as soon as it is. Please send your name and address on a card to the Arts in Education Program at OPI.

The above curriculum will be used as a basis for the summer workshop on developing art curriculum to be offered by Western Montana College at Birch Creek Camp near Dillon, June 20-24. Check the WMC summer catalog.

When taught as processes throughout the curriculum, the arts bring a more proper balance between the body and mind in basic education."

—Charles Fowler

*—Janet Altheal*
*Arts in Education Specialist*

More Resource Notes page 11

# UNCLASSIFIEDS

***Unclassifieds** is a bulletin board of resources, events and announcements of interest to educators. The naming of a service or product does not mean a recommendation or endorsement by the Office of Public Instruction.*

## TEACHER EXCHANGE

### FULBRIGHT-TEACHER EXCHANGE PROGRAM

The United States Information Agency has announced details of the 1989-90 Fulbright Teacher Exchange Program, involving a one-on-one exchange for teachers at the elementary, secondary and postsecondary levels with suitable teachers overseas. The 1989-90 overseas exchange programs will involve Argentina, Australia, Belgium/Luxembourg, Brazil, Canada, Colombia, Chile, Cyprus, Denmark, the Federal Republic of Germany, Finland, France, Hungary, Iceland, Mexico, The Netherlands, Norway, Panama, the Philippines, Senegal, South Africa, Switzerland, and the United Kingdom. The number of exchange positions available and eligibility requirements vary by country.

The program also provides opportunities for teachers to participate in summer seminars which range from three to eight weeks in length. During the summer of 1989, seminars will be held in Italy and in The Netherlands.

Applications will be available in the summer of 1988. (Programs are announced a year in advance and are subject to change.) Completed applications must be received by USIA postmarked by October 15, 1988. For further information, write: Fulbright Teacher Exchange Program, E/ASX, United States Information Agency, 301 Fourth St., S.W., Washington, DC 20547, (202) 485-2555.

## WORKSHOPS/CONFERENCES

**Ag in Montana Schools** will again sponsor summer workshops for teachers at Montana State University. The first, "Ag Awareness Seminar K-8," is geared toward teachers interested in working with AMS materials now in schools. The second, "Ag Careers Awareness Seminar 500," will combine classroom activities and hands-on workshops dealing with agriculture related careers. Both seminars are 2-credit, 500 series graduate courses. For further information check the MSU summer catalog or contact Betty Jo Malone, RR 2, Box 204, Choteau, MT 59422, 466-2597.

**Montana Aviation/Aerospace Teacher Workshops** will be held this summer in Missoula, Great Falls, Bozeman, Billings, Glendive and Helena. As many as 30 scholarships valued at $100 per site will be offered by the Montana Aeronautics Division to defray workshop expenses, including actual flight experience. For details on the workshops contact the Montana Aeronautics Division, P.O. Box 5178, Helena, MT 59604, 444-2506.

### Social Studies Workshop

Western Montana College will offer a workshop for social studies teachers this summer called "Improvement in Instruction of Social Studies K-12 Through the Use of the Computer." The 2-credit workshop will be offered for graduate credit and will run Friday and Saturday of two successive weekends, August 5-6 and 12-13. Teachers will receive instruction on how to evaluate software, develop and use databases, and on utility programs (spreadsheet, gradebook and word processor).

For more information contact William C. O'Connor, Western Montana College, Dillon, MT 59725, 683-7011.

### Math Workshop

Montana mathematics teachers are invited to participate in an Interstate Math Workshop, June 6-10 in Dubois, Wyoming. Jointly sponsored by the McREL Laboratory and the Dubois school district, workshop instructors will be Clare Heidema of McREL Laboratory and Vince Haag, retired head of the Mathematics Department of Franklin and Marshal College of Lancaster, Pennsylvania. For additional details, contact Mervin J. Lindsey, Principal, Dubois Elementary School, P.O. Box 188, Dubois, WY 82513.

### "Developing Strategies for Teens-At-Risk"

The **Montana Youth 2000 Conference: Developing Strategies for Teens-at-Risk** will be held May 13-14, 1988 at Montana State University. The purpose of the conference will be to develop solutions to some of the complex problems facing our youth. Sessions will cover current information on teen social and health problems; core causes of high-risk teen behavior; primary prevention programs in Montana to improve youth self-sufficiency and health, and strategies for local coalition-building and action plans to meet the needs of our youth.

Special rates will be offered to teams of people made up of teens, parents, youth workers, educators, health professionals or other community members. Individual registrants are also welcome.

For additional information about the conference contact Continuing Education for the Health Professional, 318 Montana Hall, MSU, Bozeman MT 59717-0001, 994-4930 or The Montana PATH Project, c/o Healthy Mothers, Healthy Babies, P.O. Box 876, Helena MT 59624, 449-8611.

## RESOURCES

### BEST BICYCLIST ON EARTH

This fun, brightly illustrated book takes the 8-12-year-old bike rider from his own driveway out into the neighborhood and beyond, helping with the skills, judgment, and confidence necessary for safe riding habits. Exciting activities, colorful graphics, and interactive projects capture the young rider's attention and encourage participation. You can obtain FREE copies by contacting Isabel Nelson, OPI, or calling 444-3126.

### TOBACCO FREE SCHOOLS

Is your school tobacco free? The Coalition for a Tobacco Free Montana wants you to receive recognition and decals to identify your school as tobacco free. Anyone wishing to become a tobacco free school is also urged to contact the coalition for information on how to become tobacco free. For details, contact Tobacco Free Schools, 825 Helena Ave., Helena, MT 59601, 1-800-252-6368.

### AIDS CATALOG

The **AIDS Catalog**, a comprehensive catalog of information resources about the disease, is available through AIDS International/Information Distribution Service. The catalog lists books, video/audio tapes, computer databases, hotlines and major organizations that provide the most current information on AIDS.

The AIDS Catalog can be purchased by sending $1.00 to AIDS, P.O. Box 2008, Saratoga, CA 95070.

### CENTENNIAL PUBLICATION

Montana's Centennial Office now has available a publication titled "Your Classroom and the Montana Centennial," written by Larry Anderson, librarian at Helena High School. The book contains ideas to incorporate the celebration of Montana's statehood (1889) into the curriculum. To receive a free copy, write to Montana Centennial Office, P.O. Box 1989, Capitol Station, Helena, MT 59620.

## AWARDS

### Computer Learning Month Announces School Certification Program

Continuing the effort to encourage more educators to discover the many uses of computers and software in the classroom, Computer Learning Month (CLM), October 1988, has launched a School Certification Program and Sweepstakes.

To become CLM certified and eligible to enter the sweepstakes, between August 1 and October 31 all teachers in a school must use three software programs they have never tried before. School principals must sign the CLM Certified School Program entry

form indicating that all teachers in their school have met the requirements. Entry forms must be mailed to CLM by October 31, 1988.

All kinds of products can be used as part of this program, including word processing, productivity, and spread sheet packages as well as entertainment and education software.

CLM will enter all qualified schools into the sweepstakes drawing and will send each school an official document acknowledging the school's certification.

On November 15, a drawing will be held to choose the winning schools. First prize is a computer and software, and the 30 second prizes are software packages. A special recognition plaque will be awarded to the State Department of Education which has the highest percentage of certified schools in the state.

CLM, an official project of the Software Publishers Association, is based in Palo Alto, California. For further information on CLM activities and the School Certification Sweepstakes entry form, please write to: Computer Learning Month, P.O. Box 60007, Palo Alto, CA 94306-6007.

# UNCLASSIFIEDS

### Itzhak Perlman Award Deadline June 30

Applications are being accepted through June 30, 1988, for the Fourth Annual Itzhak Perlman Award, presented to an outstanding musician under the age of 21 who has a physical or mental challenge. Sponsored by Very Special Arts, an international organization that provides arts programs for people with special needs, this year's award will be presented to a talented young pianist.

Named for the renowned violinist and member of Very Special Arts' Board of Directors, the Award provides financial support and career assistance to encourage the artist's further pursuit of his or her studies in the performing arts. The recipient of the award will be selected by a world-class pianist.

For more information contact Jan Hausrath or Martha Kaiser, (202) 662-8899.

## PROGRAMS

### BOOK IT!® PROGRAM

October will mark the start of the fourth annual BOOK IT!® National Reading Incentive Program sponsored by Pizza Hut. The five-month program rewards children in grades one through six with free Personal Pan Pizza and pizza parties when they complete monthly reading goals set by their teachers.

Montana's participation has increased from 1,058 programs and 31,740 students in 1985-86 to 1,832 programs and 54,960 students participating in 1987-88

For more information about the program or to register for next year's program contact the BOOK IT!® National Reading Incentive Program, P.O. Box 2999, Wichita, KS 67201, 1-800-4-BOOK-IT

### EDUCATION PROGRAMS AND THE OLYMPICS

1988 is the year of the Olympic Games The United States Olympic Committee, through the Education Council, has prepared a very exciting program for student awareness and participation called **Olympic Day in the Schools,** "Focus on Excellence." The program is designed to celebrate the ideals and spirit of the Olympic Games, the Olympic movement and Olympism. The ancient Greeks believed that performers had to be sound in mind, body and soul. Art and music were just as important to them as the physical skills and athletic prowess. The Greek word for this holistic concept was Kalo Kagathia Today we refer to it as Olympism

This program, especially suitable for the elementary grades, provides information on the Olympic Games, resources, and an outline of activities. It is an interdisciplinary approach to the Olympics that takes advantage of the natural interest in the Olympic Games during the Olympic year. To request materials, write to Bob Paul, U.S. Olympic Committee, 1750 East Boulder Street, Colorado Springs, CO 80909.

The U.S. Olympic Committee also has another educational kit ready to celebrate the Olympic year. This kit is designed for grades 4-6 and is titled "Visions of Glory." This kit has numerous games and activities as well as resource information on the Olympics for the teacher. The development of this kit was sponsored by the McDonald's Corporation and may he purchased for $11.75 which includes shipping from Visions of Glory, PO Box 81256, Chicago, IL 60681-0256.

## MORE RESOURCE NOTES

### Teacher Endorsement for Computer Education

During the past two and one-half years, several groups have discussed the possibility of establishing a certificate endorsement area for computer science/education teachers in Montana. The Board of Public Education, working with the Office of Public Instruction, first requested information from teacher training institutions in the state regarding available staff and courses which might be part of a teacher training program. Colleges and universities also were asked if prospective teachers were requesting course work leading to such an endorsement. In January 1987, a survey was sent to 250 teachers and administrators throughout the state and to several professional teacher and administrative organizations requesting input with regard to the need for computer education, the need to have teachers endorsed in this area, and what services endorsed teachers might offer schools which are not now available. From the various surveys and meetings the following general conclusions were drawn and reported to the Board of Public Education at the December 1987 meeting:

1. Montana schools need to have qualified staff to teach computer science/education programs.

2. Montana educators feel that staff presently teaching computer courses need more extensive background to provide the desired programs in their schools.

3. Teacher training institutions are interested in developing a program for endorsement of computer science/education teachers.

4. The program standards for any such endorsement should be based more in computer education and the application of computers rather than strict computer science, i.e., languages, programming, computer design, etc.

5. It is time for the Board of Public Education to establish an endorsement area in computer science/education.

At the February 5, 1988 meeting of the Board of Public Education, the Board approved the concept of an endorsement in computer education based upon the following conditions:

1 A committee of people representing mathematics, science and business from public schools and colleges he selected on an equal basis to design an appropriate teaching program in computer education to benefit the public schools.

2 Teacher education standards be designed to reflect the computer education program. Once program standards have been approved by the Board of Public Education, an endorsement should become effective three years from that date.

At this time, the Office of Public Instruction is working with various colleges and universities, Montana Council of Computer Educators representing teachers and administrators in the state, and the subject area groups named by the Board regarding the establishment of such a committee. It is hoped that program standards for such an endorsement area can be developed by early next year for presentation to the Board of Public Education

If you have recommendations for committee membership or for what should be included in such a teacher training program, contact Dan Dolan, Mathematics/Computer Education Specialist, Office of Public Instruction, State Capitol, Room 106, Helena, Montana 59620, 444-4436.

*Montana's Teacher of the Year winners were honored at a luncheon in Helena recently. Shown receiving one of the Jessica Zemsky prints they each received from State Superintendent Ed Argenbright are (from left) Gertrude Weisbaar, Fairfield, Teacher of the Year 1988, Steve Wedel, Dawson County High School, Glendive, first runner-up, and Candace Berge Johnson, Hellgate Elementary, Missoula, second runner-up.*

# CALENDAR

The following is a selection of professional enrichment opportunities and other events of interest to school personnel. For information about specific listings, address inquiries to the contact person noted

"EDvents," a complete calendar of events, is available on OPI's electronic bulletin board accessed by computer at 444-3481

### MAY

**May 9**—Workshop: *Developing Public Confidence in Your Educational Program.* Missoula. David Bishop, MALD, 442-2518

**May 11-12**—Workshop: *Developing Public Confidence in Your Educational Program.* Kalispell. David Bishop, MALD, 442-2518

**May 12-13**—Workshop: *Serving Handicapped Students Through the Perkins Voc Ed Act.* Seattle, WA. Denise Wagner, Univ of WI Madison, (608) 263-4151

**May 14**—Workshop: *Equity Principal Workshop Part Two of Three.* Helena. Jim Whealon, OPI, 444-2413

**May 16-17**—Workshop: *Assessing and Improving School Climate.* Helena. David Bishop, MALD, 442-2518

**May 17-18**—Workshop: *Non-Aversive Behavior Modification.* Lethbridge, Alb. Ted Spas, DDD/SRS, 444-5647

**May 18-19**—Workshop: *Assessing and Improving School Climate.* Bozeman. David Bishop, MALD, 442-2518

**May 18-20**—Workshop: *NDN Diagnostic Prescriptive Arithmetic Workshop.* Ronan. Ron Lukenbill, MT Facilitator Project/OPI, 444-2080

**May 18-20**—*MT Special Olympics Summer Games.* Billings. Don Byers, MT Spec Olympics, 791-2368

**May 19-20**—Workshop: *Non-Aversive Behavior Modification.* Edmonton, Alb. Ted Spas, DDD/SRS, 444-5647

**May 20-21**—Conference: *Air/Space America Teacher Conference.* San Diego, CA. Educ Dept., Space & Science Center, (619) 238-1233

### JUNE

**June 6**—Workshop: *Equity Principal Workshop Part Three of Three.* Billings. Jim Whealon, OPI, 444-2413

**June 6-30**—Workshops: *Advanced Driver Ed Workshops.* Lewistown. Curt Hahn, OPI, 444-4432

**June 7-8**—Workshop: *MT Institute for Bilingual Education Training.* Billings. Angela Branz-Spall, OPI, 444-2423

**June 7**—Workshop: *Equity Principal Workshop Part Three of Three.* Helena. Jim Whealon, OPI, 444-2413

**June 10-13**—Meeting: *Expanding Your Horizons—Spring Meeting.* Whitefish. Barb Andreoz zi, UM/OPI, 563-7921

**June 13-16**—Workshop: *GESA Facilitators Workshop.* Whitefish. Jim Whealon, Weber State/OPI 444-2413

**June 16-17**—Meeting: *Meeting of Board of Public Education.* Helena. Claudette Morton, BPE 444-6576

**June 24-Aug. 1**—Workshop: *Research Technology and International Colleagueship.* Beijing, China. Ron Lukenbill, OPI, 444-2080

### JULY

**July 9-14**—Meeting: *American Library Association.* New Orleans. 800-545-2433

**July 10-24**—Conference: *Exploring Our Constitutional Heritage and Order (ECHO).* Portland, OR. Ron Lukenbill, OPI, 444-2080

**July 11-29**—Workshops: *Advanced Driver Ed Workshops.* Lewistown. Curt Hahn, OPI, 444-4432

**July 24-29**—Conference: *Effective & Innovative Instruction for Underserved Gifted Students.* Kent, OH. Nancy Lukenbill, OPI, 444-4422

**July 25-30**—Conference: *Birth to Three: Research and Intervention.* Seattle, WA. Patricia Oelwein, Exper Educ Unit, (206) 543-4011

### AUGUST

**Aug. 1-5**—Conference: *Down Syndrome: Research and Intervention.* Seattle, WA. Patricia Oelwein, Exper Educ Unit, (206) 543-4011

**Aug. 1-5**—Workshop: *Advanced Driver Ed Workshops.* Lewistown. Curt Hahn, OPI, 444-4432

**Aug. 9-16**—Conference: *14th World Conf on Distance Education.* Oslo, Norway. Ron Lukenbill, OPI, 444-2080.

**Aug. 11-13**—Meeting: *Pacific NW Library Assn.* Juneau, AK. Margy Rolando, OPI, 444-2979

**Aug. 15-Sept. 2**—Workshops: *Advanced Driver Ed Workshops.* Lewistown. Curt Hahn, OPI, 444-4432

### SEPTEMBER

**Sept. 23**—Native American Day. Bob Parsley, OPI, 444-3013

**Sept. 28-30**—Conference: *14th Annual Chapter 1 Fall Conference.* Billings. Nancy Coopersmith, OPI, 444-4420

## TELECOMMUNICATIONS

**The following are satellite downlink sites. Times listed are Mountain Standard Time. Please contact Ron Lukenbill, OPI, 444-2080, for further information unless otherwise noted.**

**May 10**—One Day. Satellite TBA. *Emerging Technologies in Modern Language Instruction.* Duane Jackson, OPI, 444-3129

**May 12**—11:00 a.m.-1:00 p.m. Satellite TBA. *New NDA Programs*

**May 12**—10:00 a.m.-11:30 a.m., Westar IV, Ch. 11. *Pioneers of the High Frontier.* Katharine Kane, San Diego Co. Office of Ed. (619) 292-3880

**May 20**—11:00 a.m.-1:00 p.m., Satellite TBA. *New NDN Programs*

## NATIONAL SCHOOL BUS SAFETY WEEK

### September 18-24

### STUDENT POSTER CONTEST

Celebrate National School Bus Safety Week by involving your students in a statewide poster contest that promotes school bus safety. National winners will receive savings bonds, and the Montana Association of Pupil Transportation will give cash awards and certificates to the first three place winners from Montana. Here are the details:

**WHO:** Open to students in public, private or parochial schools. Divisions: grades K-3, 4-6, 7-8 and Special Education. **WHAT:** Posters on "School Bus Safety, All Ways" school bus safety concept. 12x18 inches with one-inch space for entry blank. Any media except wood, metal, glass, plastic or collage. Must be original, correct in safety concept and the exclusive work (idea, design and execution) of the student. **HOW:** Obtain an official information sheet and entry blanks from your County Superintendent of Schools or Jean Pfeffer, Transportation Coordinator, Office of Public Instruction, State Capitol, Helena, MT 59620, 444-3096.

**DEADLINE:** July 1, 1988.


# MONTANA SCHOOLS

A QUARTERLY PUBLICATION OF THE OFFICE OF PUBLIC INSTRUCTION

**Office of Public Instruction**
**State Capitol**
**Helena, MT 59620**

**Second Class**
**POSTAGE PAID**
**Helena, MT 59620**

**USPS 601690**

# Public Education in Montana 1986-87

## *6th Annual Report of the State Board of Public Education and the Office of Public Instruction*

The sixth annual report of the State Superintendent of Public Instruction and the Board of Public Education is a profile of public education in Montana for the school year 1986-87. This report is designed to give educators, administrators, policymakers and citizens accurate and useful information with which to plan for the education needs of all Montanans. As financial resources for public education are increasingly strained, this information base acquires greater significance for policy and planning. For the first time we are including the annual report as a pull-out section of *Montana Schools* in an effort to increase circulation of education information to all educators.

The report gives statistics for the 1986-87 school year as well as trends over several years, data for national-state comparisons, and projections for the future. Data were compiled from various sources and show general trends in Montana education.

*Ed Argenbright, State Superintendent*

*Board of Public Education members from left Sarah "Sally" Listerud, Wolf Point, Arthur "Rocky" Schauer, Libby; Superintendent Ed Argenbright, Tom Thompson, Heart Butte; Chairman Alan Nicholson, Helena; Executive Secretary Claudette Morton; Bill Thomas, Great Falls; student representative Darla Fox, Powderville (partially hidden); Pat Admire, administrative assistant. Board members not present: Ted Hazelbaker, Dillon, and Anita Johnson, Lewistown*

The biggest issue for the Office of Public Instruction during the 1986-87 school year was trying to convince legislators to add $94 million into the foundation program—just to get the foundation program increase to zero! Through no fault except that of the state's economy, school funding found itself in a crisis. The loss of the $94 million would have meant a 5 to 6 percent decrease in the school foundation program.

In addition, the office supported several bills dealing with school bonding and insurance programs. These proposals would have taken money from the coal tax fund to allow school districts a more stable and more equitable source of funding for building projects. They also would have prevented the insurance industry from dictating curriculum because of districts' inability to secure liability insurance. Even though these proposals did not receive the necessary legislative support, many legislators became interested in the process and will be proposing some modification of these programs during the next legislative session.

Because of difficult economic times other programs such as special education, transportation, gifted and talented, and our own office budget required much substantiation to ensure that appropriation levels were not reduced beyond reason.

Vocational education demanded a great deal of time and effort on the part of many staff members during the session. Several bills to transfer vocational-technical center governance to the Board of Regents were introduced, and they in turn affected the fiscal health of secondary vocational programs. Excess costs for secondary programs were deleted in the amount of approximately $250,000 per year. Governance of the vocational-technical centers was transferred from the Superintendent of Public Instruction to the Board of Regents.

The Office of Public Instruction was a defendant in the much-publicized underfunded schools lawsuit. Office attorneys were designated as assistants attorney general to defend the state in the suit brought by 62 school districts questioning the equity of Montana's school funding system. The trial was held during the summer, and the Judge's decision was received at the end of the year.

The number of court cases and litigation has increased tremendously in areas such as special education and Title IX equity issues. Teacher certification problems and compliance issues also have mushroomed, adding to the burdens of the legal staff.

During these legislative and legal concerns, Office of Public Instruction staff members continued to serve school districts by providing expertise in curricular areas, accrediting and monitoring school programs, improving data management systems, etc.

A number of categorical grant programs were developed during the year which increased revenue to local schools for special programs, i.e., Drug-Free Schools.

From the beginning of the 1986-87 year, legislative concerns impacted the Board of Public Education In response to Senate Bill 15 the Board held public hearings on how to reorganize the public school system. The Board also endorsed two proposals from the interim legislative sub-committee on education as well as a moratorium on creating new school districts in Montana. The Board supported district reorganization with local involvement; this legislation failed, but versions of other pieces of legislation were passed by the 1987 Legislature.

The Board vigorously supported adequate funding of public education during this very difficult economic session and supported revisions to the teacher certification denial, suspension and revocation laws. The Fiftieth Legislature also created a Certification Standards and Practices Advisory Council to the Board and mandated a complete review of accreditation standards. Preliminary planning for this study took up much of the Board's time in the last part of this year, and will be a major item for the next two years.

The Board enacted the Administration Professional Development Standard and created a special committee to examine accreditation for special schools.

As one of the defendants for the State of Montana, the Board readied its arguments in the underfunded schools lawsuit.

The School for the Deaf and Blind, which is under the supervision of the Board, maintained enrollment comparable to previous years. The six residential cottage units were filled to capacity for the entire school year Staff shortages in the education program continued to plague the school. The year closed with the resignation of Robert J. Deming, superintendent of the School for the Deaf and Blind.

The Fire Services Training School, also under the Board's supervision, offered a number of support programs and training courses for local fire services. The school administered a total of 291 certification examinations, and 1348 people attended 70 courses, at 51 different locations around the state. This year the FSTS implemented limited user fees which recovered approximately 4 percent of its operating cost. The school's Professional Certification Program became one of only a handful nationwide to receive accreditation from the National Professional Qualifications Board for the Fire Services.

# Montana Students . . .

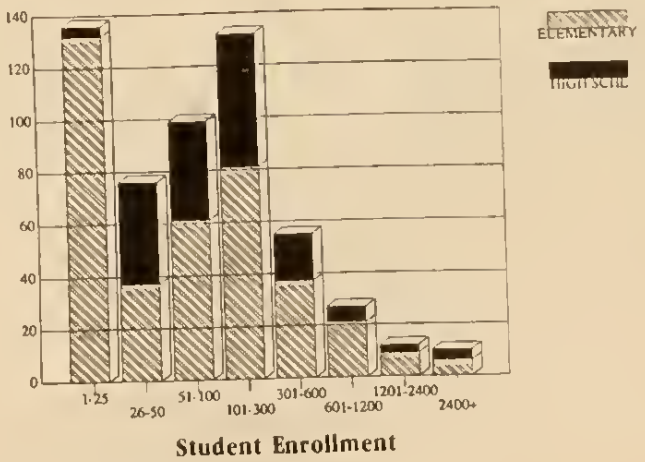
## Where They Are

In school year 1986-87, 153,327 students were enrolled in Montana's public elementary and secondary schools. This figure represents a decrease of 542 students since the previous year. Total elementary (K-8) enrollment decreased, while secondary (9-12) increased. Over a third of the state's students are in Billings, Great Falls, Missoula, Butte, Kalispell, Helena and Bozeman. In 1986-87 Yellowstone County had the largest public school enrollment in the state with 21,559 students (K-12). Petroleum County, with 113 students, had the smallest enrollment

**ACCREDITED MONTANA PUBLIC AND PRIVATE SCHOOLS**

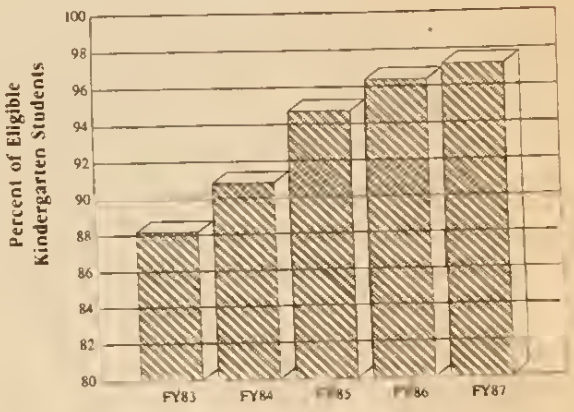
| Accreditation Status | 1986-87 |
|---|---|
| Regular accreditation | 705 |
| Accredited with advice | 59 |
| Accredited on probation | 19 |
| Nonaccredited | 0 |
| **TOTAL** | **783** |

**Number of Districts**



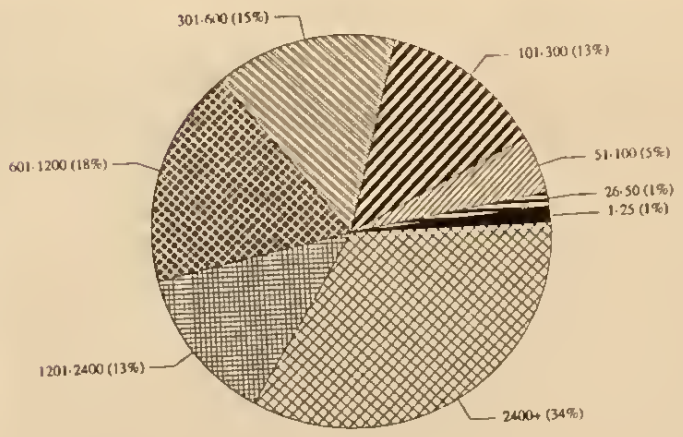

Approximately 80 percent of Montana's 548 school districts enroll 300 or fewer students.

**Percent Kindergarten Enrollment**



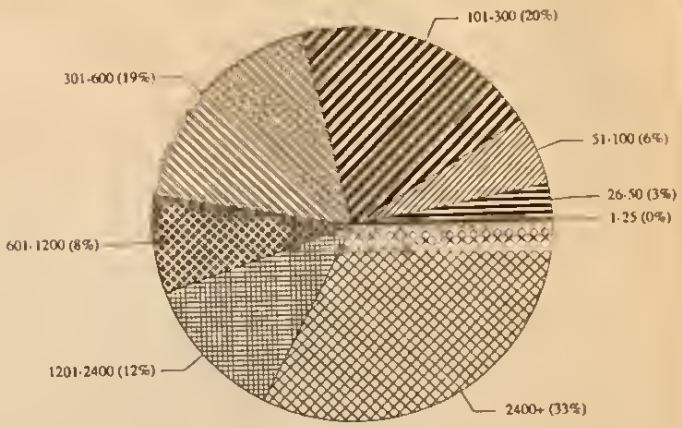

Montana has experienced a rapid increase in kindergarten enrollment. In 1983, 88 percent of children eligible to attend kindergarten were enrolled in public kindergartens; by 1987 that number had grown to 97 percent.

**Number of Students Elementary by Size**




Even though there are few very large districts (enrollment over 2,400), those districts enroll about one-third of Montana students. Montana's 133 smallest elementary districts enroll only about 1 percent of total students.

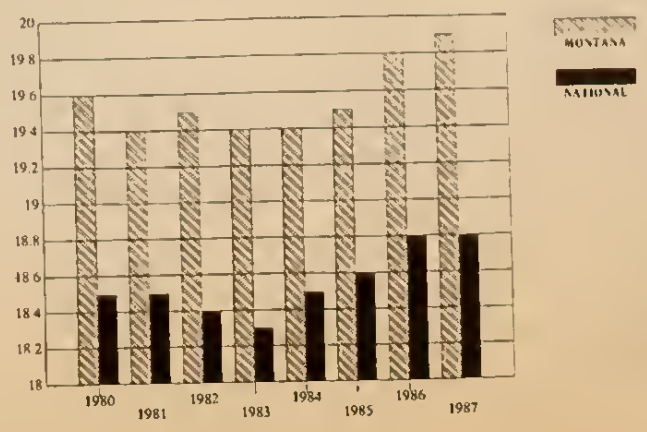
**High School by Size**




## How They Do

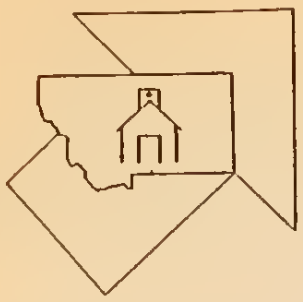
### ACT Scores

Montana students scored above the national average on the Scholastic Aptitude Test (SAT), administered by The College Board, and the American College Testing Program (ACT). Both tests measure the abilities that students usually need for academic success in college. The ACT test is more commonly taken by Montana students primarily because it is the test used most often by colleges and universities in the Midwest and West.




Compared to national averages a large number of Montana students score **very high** on the ACT test

| Score Range | National % | Montana % |
|---|---|---|
| 26-36 | 15 | 28 |
| 21-25 | 29 | 38 |
| 16-20 | 28 | 24 |
| 1-15 | 28 | 10 |
| **Total** | **100** | **100** |



# PROJECT EXCELLENCE

## Designing Education for the Next Century

### A Progress Report to the People of Montana

From its earliest days as a state, Montana has set standards for its schools. Although the standards have changed throughout the state's first century, they have always reflected the efforts of many Montanans who care about improving education and ensuring the intellectual development and well-being of their children.

In 1987, the legislature directed the State Board of Public Education to undertake a comprehensive review of the current accreditation standards. Over the past year, "**Project Excellence: Designing Education for the Next Century**" developed common educational goals for elementary and secondary schools. These goals reflect the thinking of trustees, administrators, teachers, college faculty, legislators, and citizens, who carefully considered what should be the components of the state's basic system of quality education.

The draft version of *A Basic System of Quality Education-Montana School Accreditation Standards* is now available for public review. These pages summarize that document and explain why and how the accreditation review was done, what it means to schools and communities, and how you can become involved.

In these accreditation standards, the State Board of Public Education, in partnership with the Office of Public Instruction, the education community, and Montana citizens, hopes to define expectations for student learning which will help students meet the challenges of the future. The Board will continue this active partnership to ensure that Montana's schools are equitable, accessible, and excellent; that they fully utilize the skills of Montana educators; and that they foster the constitutional goal of establishing "a system of education which will develop the full potential" of every child in the state.

# The Rationale Behind the New Standards

### Why were the accreditation standards reviewed?

The Board of Public Education reviews accreditation standards on a regular basis. In Project Excellence, its current review, the Board is seeking extensive public input into designing the foundation of Montana's basic system of quality education. Also, the review is made with an eye to the future: Montanans are increasingly aware of the need to prepare their youth for the challenges of the 21st century, and they want their schools to respond to this need.

### How were the standards developed?

A 1987 joint resolution of the legislature requested that appropriate legislative committees and the Board of Public Education establish a definition of basic education and propose a method for funding. House Joint Resolution 16 asked for a report to the legislature in 1989, the year of Montana's statehood centennial.

The accreditation review, "Project Excellence: Designing Education for the Next Century," began with a direction-setting meeting in September 1987, when educators and citizens gathered in Helena to focus on the challenges that schools will face in the future.

Eight Program Action Groups, composed of educators, parents, and civic and community leaders from all parts of Montana, then took the material from the direction-setting meeting, as well as practices which are educationally sound, and developed outcome-based standards in specific program areas. These outcomes identify what students should know and be able to do as a result of their education. Next the Program Action Groups determined the requirements, resources, and processes schools need to reasonably reach the outcomes, and finally they compared their recommendations with the current standards to determine what standards will be adequate for students faced with becoming productive citizens in the 21st century. The groups submitted their reports to the Board of Public Education and to the Implementation Action Group, which consisted of the chairperson and a representative from each Program Action Group.

The Implementation Action Group refined the standards, combined the separate reports into one draft document, and presented its recommendations to the Board. The Board added parts to the draft and, in early May, officially accepted it as appropriate for public review.

Now Montanans are urged to review the draft document. **(Copies are available at local libraries, county superintendents' offices, and school offices.)** If you approve of the standards or wish to voice a concern, please submit your comments or attend one of the seven public hearings in the state (see schedule below).

After the hearings, the Board will review all public comments and revise the draft based on the testimony. In the fall, the Board will hold a formal rulemaking hearing. With the legislative committees, it will then present its report to the 51st Legislature.

### What is outcome-based accreditation?

The new accreditation standards represent a shift of emphasis from quantitative accreditation to outcome-based accreditation. Outcome-based accreditation requires a school to demonstrate that it provides its students with an educational program based on the general outcomes or goals in the standards. For the first time all schools in Montana will be working on essential learning skills and knowledge that students are expected to possess as a result of their K-12 schooling experience. The purpose of this change is to focus on the quality of educational program rather than on how many or how much of specific resources are needed.

### What is the school district's role?

Among the many functions a school must perform, none is more important than designing curriculum. Curriculum defines the intent behind instruction and the expectations for student performance. In the new accreditation system, curriculum development and assessment are central issues, but they are local responsibilities, starting with outcomes in the standards, which form a common base for all Montana schools. The standards are minimums—goals that build the "ground floor" of each school. It is the Board's hope that districts will have more flexibility in meeting these state standards but that they will also be more accountable to their constituents.

### How will our children benefit from the new standards?

The proposed standards are learner based; they emphasize the skills and knowledge our children need as citizens of Montana, the country, and the world. They assure that Montana will continue to have a high quality, skilled work force.

The standards also provide a built-in mechanism for school improvement statewide by requiring continuous program evaluation. In essence, each school assesses itself, in accordance with the standards, and identifies its accomplishments and the areas in need of improvement. In this way, Montanans are assured that their schools constantly strive for top performance at all levels of instruction.

***PROJECT EXCELLENCE***
**Public Hearing Schedule**

| | | | |
|---|---|---|---|
| May 16 | Kalispell<br>Flathead High School | May 24 | Great Falls<br>West Elementary |
| May 17 | Missoula<br>Lewis & Clark Gymnasium | May 25 | Wolf Point<br>Wolf Point High School Auditorium |
| May 18 | Butte<br>Butte High School Auditorium | May 26 | Miles City<br>Custer Co. High School Auditorium |
| May 19 | Billings<br>West High School Auditorium | | |

**All hearings start at 7 p.m.**

### How will the current accreditation standards change?

The major shift is to outcome-based accreditation, as described above. In addition, new standards are proposed for school leadership, school climate, and school program in the areas of technology/distance learning, cross-content emphasis, creative and critical thinking skills, and curriculum development and assessment. New categories of accreditation include "Project Excellence Schools"—exemplary schools that exceed the standards and serve as models for effective schools. Another important change is local flexibility.

### Where do the standards give schools more flexibility?

In the proposed accreditation standards, local school leaders and the community are asked to take the lead in developing education programs and resources that meet or exceed the state standards. This role is enhanced by flexibility in the areas of:

#### ➜ Alternatives

With approval from the Board of Public Education, schools may use alternatives to meet the standards. The Board encourages schools to develop creative programs that help students achieve, or exceed the learner outcomes. If these programs are shown to be successful, local schools may implement them for five years.

#### ➜ Staffing

The proposed standards allow schools to develop alternatives in staffing—such as sharing administrators, library/media specialists, or guidance specialists—in order to help students meet the learner outcomes.

While the Board recognizes the need for maximum class sizes and teacher loads, schools may provide aides and support staff or they may show that teaching methods and the quality of instruction nullify the effect of larger class size on student performance.

#### ➜ Academic Program

At a minimum, students in Montana schools are offered a balanced academic program based on the courses needed to meet the required learner outcomes. Schools begin with this foundation and design programs that meet the unique needs of their students. Also, a secondary student may seek alternative credits from the local school trustees, assuming that curriculum and assessment requirements were met.

#### ➜ Distance Learning

If schools can show a need, they may be ahle to utilize technology (computer networking, video or audio programs) to meet some of the educational program.

#### ➜ Scheduling

The Board of Public Education will seek legislation to allow greater flexibility in the school year and week so that schools may explore nontraditional school calendars such as the four-day week, 45 days in school with 15 days vacation, year round school, and other options.

#### ➜ Budgeting

Local schools are not required to meet specific budget figures in any program area.

#### ➜ Curriculum Development and Assessment

The Board recognizes that schools and their staff will need additional time to comply with this aspect of the program and is seeking legislation which will allow for time during the school year for staff to work in these areas.

#### ➜ Phase In

The Board is aware that some standards, though educationally sound, may require additional fiscal and human resources, and it is planning to phase in those standards.

### When will the standards be effective?

The refined standards will be effective July 1, 1989. Standards which require additional district resources will take effect on a phase in basis.

### You can be involved!

The Board of Public Education would like to hear from you: Do you approve of the standards? Are there areas that concern you? Which standards will significantly impact your school and how? Are there standards that you'd like to see phased in over a period of time? What suggestions do you have?

Are there outcomes which need modification and, if so, what would you suggest? Are there outcomes which should not be included? Are there groups of outcomes which should be elective (for example· If a course in biology is offered, these are the outcomes it should meet...)?

You are encouraged to comment on the standards at a public hearing in your area (see schedule on page one), or hy writing to the Board of Public Education, 33 S. Last Chance Gulch, Helena, MT 59620, no later than May 31

## A BASIC SYSTEM OF QUALITY EDUCATION
## A Summary of Proposed Accreditation Standards for Montana Schools

The following is a narrative summary of the accreditation standards proposed in *A Basic System of Quality Education Montana School Accreditation Standards*. Please refer to the actual document for the original regulatory language and for sections in their entirety.

Each student in the public schools of Montana has universal access to a balanced and challenging education. The education program is equitable and addresses future as well as present needs. When a student working within his or her abilities completes the Montana high school program, the graduate is prepared to be a productive citizen of the state, nation, and world.

### Accreditation: A Partnership

Meeting Montana's educational goals requires a partnership of school trustees, administrators, teachers, parents, community, and the state

The State Board of Public Education is responsihle for establishing, maintaining, and reviewing standards for public education (K-12). The Board routinely reviews the accreditation status of each Montana school in order to determine the school's eligibility for state funding. The Board is also responsible for approving a school's proposed alternatives to the accreditation standards.

Each Montana school district is responsible for implementing the basic system of quality education and for molding it to meet its students' education needs. The school district's education program is based on sequentially developed learner outcomes and on the leadership, instructional skills, school climate, facilities, and resources needed to ensure those outcomes.

### School Leadership

Leaders in Montana schools serve to help each student reach his or her full academic and personal potential To this end, the school commits itself and its resources to instructional excellence and to offering its students a balanced and challenging education

School trustees establish policies and procedures to meet educational goals. They encourage active participation by all community members, build a positive school environment, and set priorities for fiscal, human, and material resources.

School administrators work with the trustees, staff, students, parents, and community to set educational goals. They provide instructional leadership, keep parents and community informed, and manage the school's daily operation efficiently and effectively.

Teachers understand, respect, and maintain high expectations for all students and set objectives that students clearly understand. They know their teaching areas and use professional teaching skills to help students learn. They evaluate student progress and work closely with parents. They are actively involved in curriculum development, assessment, and improvement.

All staff are certified, assigned, and evaluated according to standards for effective school practices. All school personnel are given opportunities for continued professional development.

### School Climate

The Montana public school is a positive partnership of school and community. Its central purpose is the intellectual development of its students; all of its resources are organized in support of that purpose.

School personnel, programs, and services comply with all local, state, and federal laws. The school facility is a safe, healthy place that contributes positively to students' attitudes toward school and to their educational achievement.

The school encourages harmonious staff relationships, respect for learner rights, and a concern for the well-being of others. Students take responsibility for their education and conduct themselves respectfully and appropriately. Parents and community members take active roles in their children's schooling and help their school set education goals.

The Board of Public Education is seeking legislation to allow school schedules to be flexible so that educational goals are achieved It is hoped that schools will be able to explore the effectiveness of nontraditional school calendars and report their findings to the Office of Public Instruction.

### Academic Requirements

Academic requirements form a solid foundation for each school's education program At the elementary level, they encourage cross-content experiences and the development of essential learning and thinking skills.

In middle schools and junior high schools, learner outcomes are achieved through a program of English language arts, social studies, mathematics, science, health enhancement, fine arts, and vocational/practical arts. Learner outcomes at the high school level are achieved through a program of English language arts, social studies, mathematics, science, health enhancement, fine arts, vocational/practical arts, and foreign language for a total of 22 units. As a minimum, the high school's graduation requirements include a total of 20 units.

### The Education Program

Equal access to learning opportunities and meeting individual learning needs are primary considerations in all school programs, at all levels. The school is encouraged to develop the means to assess the needs of each student, including but not limited to, students identified as gifted and talented, special education, bilingual, at-risk, ethnic minority, and educationally disadvantaged

The school provides learning experiences matched to each student's interests, readiness, and learning style. Through all of its programs and services, the school recognizes that

*cont.*

*The Education Program cont.*

cultural diversity enriches individual and collective well-being. The school nurtures an understanding of the values and recognizes the contributions of Montana's Native Americans and the unique needs of Native American students and other minority groups

The school's education program is an interdependent program of knowledge, skills, and opportunities presented in meaningful contexts. The program integrates skills across subject areas and allows students to use creative and critical thinking skills in order to reach their highest potential and gain satisfaction.

The school provides learning resources that are universally available, free of bias, culturally inclusive, and current. It offers students opportunities for self-direction and decision making. Students are given equal access to resources, including technology Instruction materials are sequential and compatible with previous and future offerings.

Students have access to a wide range of up-to-date print and nonprint resources, including technology, which support the curriculum and help students prepare for the demands of an information-based society. Technology is a tool for instruction, used by the learner and teacher in partnership.

The school works with the community to enhance educational experiences hy using valuable out-of-school resources.

### Curriculum Development and Assessment

Each Montana school is responsible for defining and organizing the basic system of quality education into specific curricula. Curriculum development and assessment are cooperative endeavors of trustees, administrators, teachers, specialists, support staff, parents, and community

The school has clear goals, tools, and procedures for evaluating its curricula on an ongoing basis. The school uses this self-study to identify areas of accomplishment and to modify areas that need improvement.

### Program Areas

The school's basic education program includes communication arts, fine arts, health enhancement, mathematics, science, social studies, vocational/practical arts, library/media, and guidance. Curricula in each of these areas are based on learner outcomes the skills and knowledge students should have as a result of their K-12 schooling.

The learner outcomes are developed sequentially through three checkpoints: completion of the primary level (typically, at the end of grade 3), completion of the intermediate level (typically, at the end of grade 8), and upon graduation (typically, the completion of grade 12). The school incorporates all learner-outcome concepts and skills into its curriculum, introduces them when appropriate, builds on them through the years, and individualizes them to meet student needs.

Each program area includes general program standards and specific learner outcomes. The following excerpts are from the first section (general program standards).

#### COMMUNICATION ARTS

Language is at the core of successful schooling and living. Through language humans learn beyond their own direct experiences; through their skills, concepts, and experiences in the communication arts, students become educated not merely in "English," but in all subject areas. Thus, effective communication arts programs have a very high priority in the curricula of Montana schools.

The education program in Communication Arts encompasses the study of languages and literatures, the development of reading, writing, listening, and speaking skills, effective media use, and the nurturing of creative, logical, and critical thinking

In general, a school's Communication Arts program shall:

1 Be literature-based and include a wide variety of fiction and nonfiction, representing diverse cultures of Montana, the United States, and the world.

2. Create a "whole language" environment that integrates communication skills in all subject areas and that gives students extensive opportunities to use these skills in meaningful contexts.

3. Encourage reading as a search for information, meaning, and pleasure. The program will provide literature of high quality, which is enriching for every age and ability level.

4. Have a writing program that emphasizes process and focuses on the communication of ideas.

5. Have an oral language program that involves students in a variety of speaking, listening, and viewing activities.

6. Give students opportunities to pursue their special gifts and interests through co-curricular offerings such as drama, speech, debate, journalism, literary publications, and humanities.

7. Provide programs that enable students to use their communication arts skills in the community and in the world.

8. Take advantage of the offerings of special groups in education, business, and industry.

9 Be accomplished hy activities such as creative dramas, cooperative learning, small-group discussions, whole-language experiences, and cross-content projects.

10 Use the language of limited English proficient students to develop more diverse English language skills.

#### FINE ARTS

The Fine Arts provide a means of expression and communication that goes beyond speaking and writing. The Fine Arts are our most illuminating and universal form of language; through them we transmit to our children our cultural heritage and humanity

The Fine Arts dynamically cultivate all of the senses, emotions, and intelligences. They are the means by which students develop literacy in the symbol systems fundamental to higher order and critical thinking. And, they constitute a dimension of learning which extends and fulfills human experience unlike that of any other discipline.

The Fine Arts includes the visual arts, performing arts, literary arts, and iostruction that incorporates arts history, criticism, production, and aesthetics.

A hasic Fine Arts program enables a student to.

1 Understand the principal sensory, formal, technical, and expressive qualities of each of the Fine Arts.

2 Identify processes, materials, tools, and disciplines required to produce the visual, performing, and literary arts.

3. Apply their knowledge of concepts, elements, principles, theories, and processes in the Fine Arts

4. Develop their intuitive and creative thought processes as a balance to learning in the cognitive and psychomotor domains.

5. Make informed judgments about the Fine Arts and about the arts' relationship to the history, culture, and environments of the world's people.

6. Understand the relevance of their education in the Fine Arts to the range of arts professions and to a lifetime of aesthetic pleasure.

7. Use materials, tools, and equipment safely

#### HEALTH ENHANCEMENT

Health Enhancement teaches children the importance of achieving and maintaining a healthy lifestyle. It helps them actively protect, maintain, and improve their health and sen sitizes them to society's critical health issues.

A basic Health Enhancement program encompasses health education and physical education It shall

1 Integrate lifestyle management throughout the curriculum.

2 Focus on the total self and the development of responsibility, values, attitudes, and behaviors.

3 Give students decision making tools for personal health

4 Address intellectual, social, emotional, and physical dimensions of healthy lifestyles

#### MATHEMATICS

Mathematics gives students the skills necessary to solve problems, to reason inductively and deductively, and to apply the numerical and spatial concepts necessary to function according to their needs in a technological society.

Priorities for basic mathematical skills include more than computation. A technological society requires daily use of skills such as estimating, problem solving, organizing and interpreting data, measuring, predicting, and applying mathematics to everyday situations.

Mathematics is a dynamic, growing, and changing discipline whose cross-curricular significance requires its integration into all academic areas. An effective curriculum is responsive to recent developments in mathematical knowledge, the needs of an information society, the availability of technology such as computers and calculators, and includes relevant applications of mathematics.

In a basic Mathematics program, students:

1. Become mathematical problem solvers.
2. Learn to communicate mathematically.
3. Learn to reason mathematically.
4 Learn to value mathematics.
5. Become confident in their ability to do mathematics.
6. Select and use appropriate technology to solve problems and acquire new knowledge.

#### SCIENCE

Science is a creative process used to investigate natural phenomena, resulting in the formation of theories verified by directed observations. In scientific procedure a problem is identified, pertinent data is gathered, a hypothesis is formulated, experiments are performed, the results are interpreted, and conclusions are drawn.

Science education strengthens students' basic investigative skills and fosters their understanding of and interest in the world. They acquire and apply critical thinking and problem solving skills and information critical to survival in a technological society.

A basic program in Science allows students to:

1 Use scientific processes and communicate how they are used to develop scientific knowledge.

2. Think logically, critically, and creatively

3. Recognize that scientific knowledge is continually subject to review, verification, and revision.

4 Gather reliable information in all areas of the natural sciences, using laboratory equipment and hands-on activities safely and appropriately.

5. Show competence in measurement and mathematics.

6. Gain and convey information through oral, written, and graphic communication.

7. Recognize the character of independent and dependent variables.

8. Understand the core concepts of current scientific knowledge and use them in problem solving and decision making

9. Identify problems of individual or social importance and select and apply appropriate scientific techniques to investigate these problems.

10. Understand the interactions of science, technology, and society.

11. Use science-related skills effectively in careers, leisure activities, and lifelong learning.

#### SOCIAL STUDIES

Social studies draws on the social sciences (economics, political science, geography, sociology, anthropology, psychology) and the humanities (history, literature, the arts, and philosophy). The social studies cover United States studies, global studies, and the social science disciplines.

A basic program in Social Studies allows a student to:

1. Participate in meaningful first-hand and hands-on learning activities that draw on experiences in the home, school, neighborhood, and the world.

2. Participate in committee work, role playing, creative drama, classroom discussion, and interviews.

3. Develop research skills, which may include the gathering and recording of information from a variety of sources such as films, pictures, oral and written literature, music, and field trips.

4 Develop citizenship skills through sharing, responsibility, cooperative learning, compromising, conflict resolution, and decision making

5. Enhance his/her communication skills through drawing, acting, reading, writing, listening, and speaking.

6. Use topics that engage his/her interests and extend per-

*cont.*

*Social Studies cont*

sonal context for learning to a global realm. Learning activities are varied and involve the student intellectually, socially, and physically.

7. Nurture an understanding of the contemporary and historical traditions and values of the American Indian culture and other minority cultures of significance to Montana and to social studies in general.

### VOCATIONAL/PRACTICAL ARTS

The Vocational/Practical Arts is a program of articulated, well-planned, coordinated, and sequential experiences that prepare students for successful participation in community, home, life, postsecondary education, and work.

The Vocational/Practical Arts program includes Agriculture, Business and Office Education, Home Economics and Home Economics Wage Earning, Industrial Arts/Technology, Marketing, and Trades and Industry.

Vocational/Practical Arts serve students who want, need, and/or benefit from foundations for career planning; communication and computation skills and technical literacy; personal skills and attitudes, broad and specific occupational skills and knowledge; and employment skills, including self-employment.

A basic program in Vocational/Practical Arts shall:

1. Be an integral part of the education program and a complement to the academic program.
2. Motivate students, provide exploratory experiences, and increase career planning and employment skills.
3. Be a cooperative effort of business, industry, and schools, contributing to Montana's economic development.
4. Give students the opportunity to develop their vocational aptitudes to the highest level possible in order to promote success in their postsecondary living experience.
5. Increase students' abilities to function successfully in home, social, and consumer environments.
6. Develop student leadership skills through curricular and co-curricular activities that encourage active interest in the community and in the value of good citizenship.
7. Enable students to use leisure time in a worthwhile manner.
8. Motivate students to master academic skills and demonstrate the practical application of those skills in a working and living environment.
9. Help students apply critical thinking, decision making, and problem solving skills to vocational education and occupations.
10. Develop positive attitudes toward work, respect for quality workmanship, and effective interpersonal skills.
11. Develop an understanding of safe, efficient, and courteous highway use as a passenger, pedestrian, cyclist, or motor vehicle operator.

### LIBRARY/MEDIA

The pleasure of reading, viewing, and listening, and the ability to use and manage information are essential for students to function in a global community.

Library/media services bring together the resources and technology that enable a student to:

1. Read for the sake of enjoyment and enrichment.
2. Read, listen and view critically.
3. Learn effective ways to find information and material to meet his/her unique need.
4. Organize, analyze, and interpret information.
5. Integrate information across content areas.
6. Reach conclusions.
7. Become a lifelong learner.

To help students achieve learner outcomes, the Library/Media program shall:

1. Teach library media skills in sequence and in the context of the K-12 curriculum.
2. Support and enrich all areas of the school program.
3. Integrate library/media instruction across content areas.
4. Involve students in literature and reading, with the opportunity for reader advisement in an unstructured, informal setting.
5. Give students the opportunity to identify and meet personal information needs.

### GUIDANCE

Students of all ages must make many choices that affect their lives, now and in the future. Comprehensive guidance programs are a way to serve the divergent and changing needs of students.

The student is the focus and purpose of a K-12 guidance program, and all students should benefit from it. Guidance counseling is the specific educational service that helps individual students develop their personal, social, educational, and career/life planning skills.

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For more information, write or call

Board of Public Education
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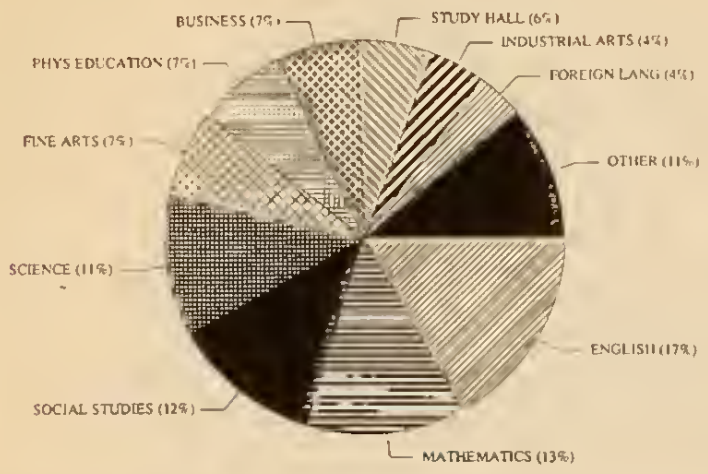
444-6576

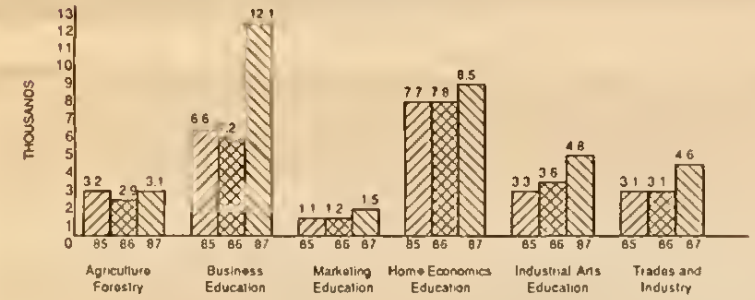
## What They Study

### High School Courses




Nearly 32,000 Montana students were assisted through special programs administered by the state in 1986-87. Those programs included Educationally Disadvantaged and Migrant Education (both under Education Consolidation and Improvement Act, or ECIA, Chapter 1); Bilingual Education/English Language Proficiency; Education of the Handicapped; and Montana School for the Deaf and Blind. Statistics on the largest programs are included here.

### Secondary Vocational Education by Program Area 1985-87




### Statewide Summary of Handicapped Students December 1986

| | |
|---|---|
| Hard of Hearing | 138 |
| Deaf | 17 |
| Mentally Retarded | 1,140 |
| Other Health Impaired | 158 |
| Orthopedically Impaired | 116 |
| Speech Impaired | 4,253 |
| Visually Impaired | 60 |
| Learning Disabled | 7,519 |
| Emotionally Disturbed | 616 |
| Deaf/Blind | 15 |
| Multihandicapped | 260 |
| Noncategorical Handicap (Age 5 and Below Only) | 470 |

### EDUCATIONALLY DISADVANTAGED STUDENTS ECIA Chapter 1 Participants 1986-87

| By Subject Area | |
|---|---|
| Reading | 8,898 |
| Math | 6,819 |
| Language Arts | 3,435 |

### GENERAL EDUCATIONAL DEVELOPMENT (GED) PROGRAM PARTICIPATION 1986

| Total volume of testing | Number tested (undup. count) | Total # certificates issued | Average age |
|---|---|---|---|
| 3,104 | 2,462 | 1,737 | 25.2 |

### PROGRAMS FOR GIFTED AND TALENTED STUDENTS 1986-87

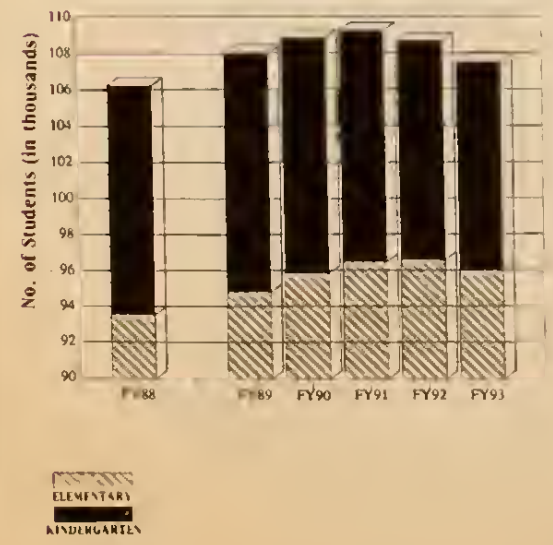
| Identifiable G/T programs | Total no. districts receiving grants | Amounts of state grants |
|---|---|---|
| 120 | 49 | $86,100 |

## Where They'll Come From

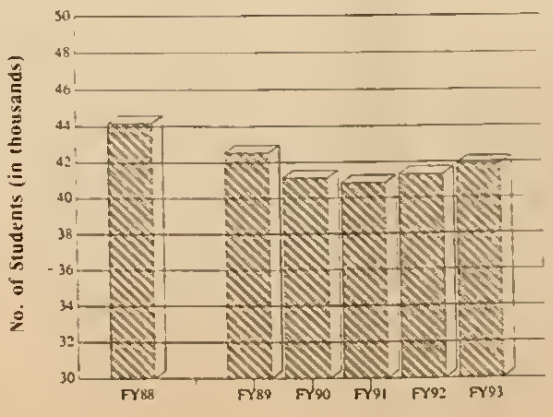
Enrollment trends show that after an increase in the number of school-age children (ages 5-17) in Montana before and during the 1960s, that population began to decline in 1970. Between 1975 and 1982, the number of high school students, in fact, decreased sharply—an indication of what statisticians call "the last of the baby boomers" passing through the public school system.

Enrollment trends for the 1980s show other changes in the state's student population: elementary school enrollment has risen since about 1980; secondary school enrollment is in a decline. The increase in elementary school enrollment is partly attributable to the fact that the baby boomers' children—the "baby boomlet"—are now entering and passing through the public school system.

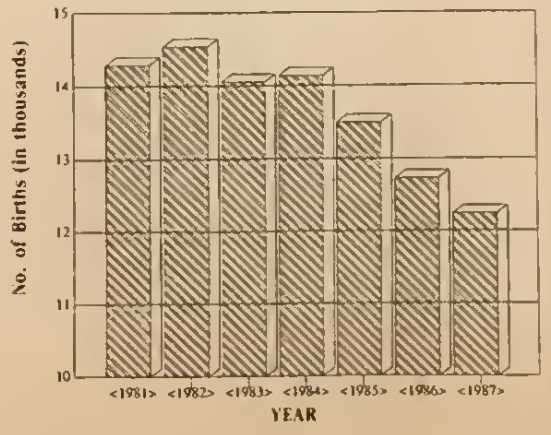
### Elementary Enrollment Projections




### High School Enrollment Projections



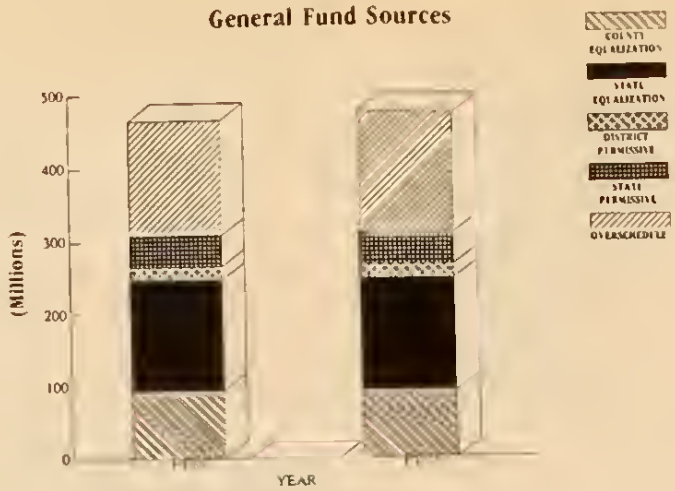

### Births in Montana 1981-1987




Births in Montana have dropped by about 2,000 over the last three years. This will dramatically affect school enrollment in the future unless total population in the state begins to grow through new jobs and migration.

## What It Costs/How It's Funded

### General Fund Sources

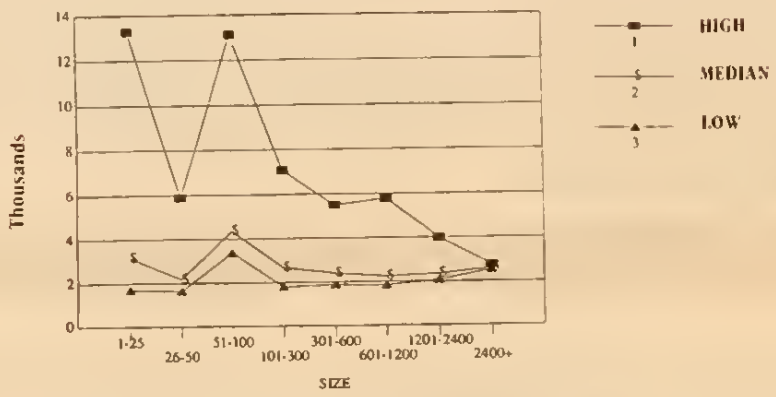



Montana budgeted $475,961,993 for public elementary and secondary education in school year 1986-87 for the general fund of school districts. The greatest proportion of these funds came from property taxes (district overschedule amount, the districts' share of the permissive levy and the counties' share of the foundation program). This includes $26,325,986 for special education.

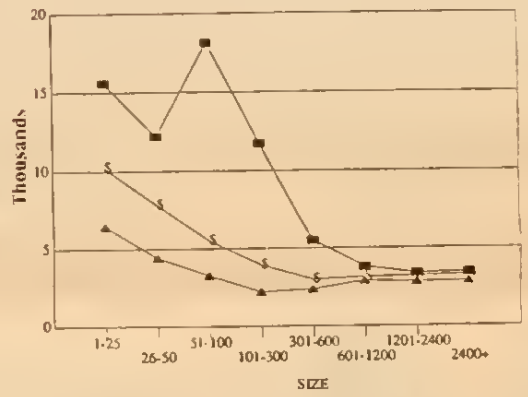
### Detail of State Equalization Sources

The state equalization portion received a substantial amount from Interest and Income (income from state lands) in 1985 when the oil boom was at its peak. Now there is increased dependence on income tax.

### Cost Per Student Elementary




### Cost Per Student High School




The general fund cost per student varies widely among the districts in Montana, even within districts of the same size and type (elementary and high school). The line graphs for elementary and high school show the lowest, median and highest cost for each size group.

### MONTANA SUMMARY OF SELECTED WALL CHART KEY INDICATORS

| | 1972 | 1980 | 1982 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| **ACT Score** | | | | | | |
| Montana | 21.1 | 19.6 | 19.5 | 19.5 | 19.8 | 19.9 |
| National Average | 19.1 | 18.5 | 18.4 | 18.6 | 18.8 | 18.7 |
| Rank (Out of 28) | 3 | 5 | 6 | 6 | [illegible] | 4 |
| **High School Graduation Rate (Adjusted)** | | | | | | |
| Montana | .. | | [illegible] | [illegible] | [illegible] | |
| National Average | .. | . | 69.5 | [illegible] | [illegible] | |
| Rank | .. | . | 9 | 5 | 6 | |
| **Current Expenditures Per Pupil** | | | | | | |
| Montana | $900 | $2,476 | $2,998 | $3,847 | $4,091 | |
| National Average | $990 | $2,272 | $2,726 | $3,470 | $3,752 | |
| Rank | 25 | 16 | 14 | 14 | 15 | |
| **Pupil/Teacher Ratio** | | | | | | |
| Montana | ... | 16.6 | 16.5 | 16.1 | 15.9 | 15.6 |
| National Average | 22.3 | 19.1 | 18.9 | 18.1 | 17.9 | 17.8 |
| Rank | .. | 8 | 11 | 15 | 17 | 15 |
| **Federal Funds (%)** | | | | | | |
| Montana | 10.3 | 9.4 | 6.9 | 8.6 | [illegible] | |
| National Average | 8.9 | 9.8 | [illegible] | 6.6 | 6.7 | .. |
| Rank | 25 | 29 | 27 | 17 | 23 | |
| **State Funds (%)** | | | | | | |
| Montana | 22.3 | 48.1 | 46.9 | 49.8 | 49.0 | |
| National Average | 38.3 | 46.8 | 47.6 | 48.9 | 49.4 | ... |
| Rank | 45 | 23 | 26 | 24 | 25 | ... |
| **Local Funds (%)** | | | | | | |
| Montana | 67.3 | 42.6 | 46.2 | 41.6 | 44.0 | |
| National Average | 52.8 | 43.4 | 45.0 | 44.4 | 43.9 | ... |
| Rank | 9 | 27 | 26 | 29 | 27 | |
| **Teacher Salaries** | | | | | | |
| Montana | $8,514 | $14,537 | $17,770 | $21,705 | $22,482 | $23,206 |
| National Average | $9,705 | $15,970 | $19,274 | $23,595 | $25,201 | $26,551 |
| Rank | 32 | 28 | 29 | 27 | 31 | 34 |

**Montana**—Montana's 1987 ACT score (19.9) increased by one-tenth of a point over 1986, improving its ranking among ACT states from 7th (1986) to 4th (1987). The state's 1986 graduation rate (87.2%) matches its 1985 figure. It exceeds the 1986 national average (71.5%) by about 16 points and has moved upward by 9 percentage points since 1982.

*From Fifth Annual Wall Chart State Education Statistics, William J. Bennett, U.S. Secretary of Education, Feb. 1988.